

SP
CENTERCENTER
DRILLGSS
STARTING
DRILLGP
DRILL

TFD

SPIRAL
GUN
BARREL
DRILLTOGLON
MULTI
CHAMFERTOGLON
SHARPTOGLON
HARDCORNER
ROUNDING
CUTTER

JIT

SUBMARINE
GATE
DRILLMICRO
TOOLTECHNICAL
INFOR-
MATIONCUSTOMIZED
TOOL
SEMIORDER
TOOLINST-
RUCTIONCOMPANY
PROFILE

超高速ドリル Ultra high speed drill

GPドリル



GP Drill Great Performance Drill

鋼に世界最速の小径穴加工

Available for Hardened steel drilling
smallest hole by world speed

超高速加工への挑戦

1穴0.25秒 寿命40000穴以上※

Drill for Ultra high speed manufacturing
Speed: 0.25 sec/hole - Tool life 40,000 holes.※ステンレス、HRC40までの調質鋼にも
安定した加工が可能

Processing on heat-treated steel is possible.

3Dまでノンステップで加工可能
(状況により7Dまで加工可能)

超寿命

Non-step drilling up to L/D3
(Up to L/D7, depending on situation)
Long tool life.

※GPDS1CBALT

被削材: S50C Work Material: S50C

加工径: φ1mm Diameter: φ1mm

加工深さ: 4mm Processing depth: 4mm

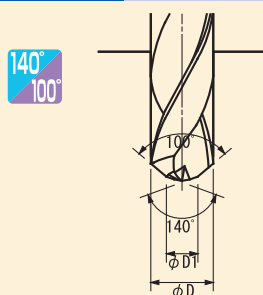
製品区分 Product	画像 Photo	材質 Material	表面処理 Coating	特長 Special Features	シャンク Shank	刃数 Flutes	回転方向 Direction of rotation	先端角 Point angle	刃径 φD
GPDS-CBALT		超硬	ALT	Hi-SPEED	SHANK h6	2枚刃	右刃	140° 100°	0.3~ 3.0
GPDR-CBALT		超硬	ALT	Hi-SPEED	SHANK h6	2枚刃	右刃	140° 100°	0.3~ 3.0

技術レポートについては、P.109、110をご覧ください。
See Page 109, 110 for technical information.アイコンについての説明は、P.125をご覧ください。
See Page 125 for icon explanation.

GPドリルについて

Guide to GP Drill

先端角 Point angle



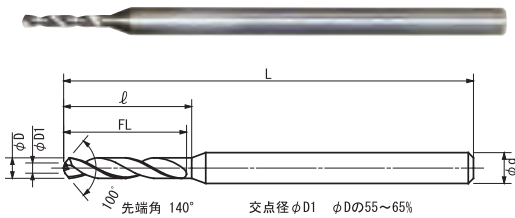
交点径 φD1 φDの55~65%



穴加工/Hole Processing

GPドリル ショート5D ALTコーティング

GP Drill Short 5D ALT coating



超硬 ALT Hi-SPEED SHANK h6 2枚刃 右刃 140° 100° 0.3~3.0

単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 ℓ	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDS0.3CBALT	0.3	1.8	1.9	40	3	●	¥4,000
GPDS0.31CBALT	0.31	1.8	1.9	40	3	●	¥5,000
GPDS0.32CBALT	0.32	1.8	1.9	40	3	●	¥5,000
GPDS0.33CBALT	0.33	1.8	1.9	40	3	●	¥5,000
GPDS0.34CBALT	0.34	1.8	1.9	40	3	●	¥5,000
GPDS0.35CBALT	0.35	2.1	2.2	40	3	●	¥5,000
GPDS0.36CBALT	0.36	2.1	2.2	40	3	●	¥5,000
GPDS0.37CBALT	0.37	2.1	2.2	40	3	●	¥5,000
GPDS0.38CBALT	0.38	2.1	2.2	40	3	●	¥5,000
GPDS0.39CBALT	0.39	2.1	2.2	40	3	●	¥5,000
GPDS0.4CBALT	0.4	2.4	2.5	40	3	●	¥4,000
GPDS0.41CBALT	0.41	2.4	2.5	40	3	●	¥5,000
GPDS0.42CBALT	0.42	2.4	2.5	40	3	●	¥5,000
GPDS0.43CBALT	0.43	2.4	2.5	40	3	●	¥5,000
GPDS0.44CBALT	0.44	2.4	2.5	40	3	●	¥5,000
GPDS0.45CBALT	0.45	2.7	2.8	40	3	●	¥5,000
GPDS0.46CBALT	0.46	2.7	2.8	40	3	●	¥5,000
GPDS0.47CBALT	0.47	2.7	2.8	40	3	●	¥5,000
GPDS0.48CBALT	0.48	2.7	2.8	40	3	●	¥5,000
GPDS0.49CBALT	0.49	2.7	2.8	40	3	●	¥5,000
GPDS0.5CBALT	0.5	3	3.2	40	3	●	¥3,500
GPDS0.51CBALT	0.51	3	3.2	40	3	●	¥4,500
GPDS0.52CBALT	0.52	3	3.2	40	3	●	¥4,500
GPDS0.53CBALT	0.53	3	3.2	40	3	●	¥4,500
GPDS0.54CBALT	0.54	3	3.2	40	3	●	¥4,500
GPDS0.55CBALT	0.55	3	3.2	40	3	●	¥4,500
GPDS0.56CBALT	0.56	3	3.2	40	3	●	¥4,500
GPDS0.57CBALT	0.57	3	3.2	40	3	●	¥4,500
GPDS0.58CBALT	0.58	3	3.2	40	3	●	¥4,500
GPDS0.59CBALT	0.59	3	3.2	40	3	●	¥4,500
GPDS0.6CBALT	0.6	3.6	3.8	40	3	●	¥3,500
GPDS0.61CBALT	0.61	3.6	3.8	40	3	●	¥4,500
GPDS0.62CBALT	0.62	3.6	3.8	40	3	●	¥4,500
GPDS0.63CBALT	0.63	3.6	3.8	40	3	●	¥4,500
GPDS0.64CBALT	0.64	3.6	3.8	40	3	●	¥4,500
GPDS0.65CBALT	0.65	3.6	3.8	40	3	●	¥4,500
GPDS0.66CBALT	0.66	3.6	3.8	40	3	●	¥4,500
GPDS0.67CBALT	0.67	3.6	3.8	40	3	●	¥4,500
GPDS0.68CBALT	0.68	3.6	3.8	40	3	●	¥4,500
GPDS0.69CBALT	0.69	3.6	3.8	40	3	●	¥4,500

単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 ℓ	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDS0.7CBALT	0.7	4.2	4.4	40	3	●	¥3,500
GPDS0.71CBALT	0.71	4.2	4.4	40	3	●	¥4,500
GPDS0.72CBALT	0.72	4.2	4.4	40	3	●	¥4,500
GPDS0.73CBALT	0.73	4.2	4.4	40	3	●	¥4,500
GPDS0.74CBALT	0.74	4.2	4.4	40	3	●	¥4,500
GPDS0.75CBALT	0.75	4.2	4.4	40	3	●	¥4,500
GPDS0.76CBALT	0.76	4.2	4.4	40	3	●	¥4,500
GPDS0.77CBALT	0.77	4.2	4.4	40	3	●	¥4,500
GPDS0.78CBALT	0.78	4.2	4.4	40	3	●	¥4,500
GPDS0.79CBALT	0.79	4.2	4.4	40	3	●	¥4,500
GPDS0.8CBALT	0.8	4.8	5	40	3	●	¥3,500
GPDS0.81CBALT	0.81	4.8	5	40	3	●	¥4,500
GPDS0.82CBALT	0.82	4.8	5	40	3	●	¥4,500
GPDS0.83CBALT	0.83	4.8	5	40	3	●	¥4,500
GPDS0.84CBALT	0.84	4.8	5	40	3	●	¥4,500
GPDS0.85CBALT	0.85	4.8	5	40	3	●	¥4,500
GPDS0.86CBALT	0.86	4.8	5	40	3	●	¥4,500
GPDS0.87CBALT	0.87	4.8	5	40	3	●	¥4,500
GPDS0.88CBALT	0.88	4.8	5	40	3	●	¥4,500
GPDS0.89CBALT	0.89	4.8	5	40	3	●	¥4,500
GPDS0.9CBALT	0.9	5.4	5.7	40	3	●	¥3,500
GPDS0.91CBALT	0.91	5.4	5.7	40	3	●	¥4,500
GPDS0.92CBALT	0.92	5.4	5.7	40	3	●	¥4,500
GPDS0.93CBALT	0.93	5.4	5.7	40	3	●	¥4,500
GPDS0.94CBALT	0.94	5.4	5.7	40	3	●	¥4,500
GPDS0.95CBALT	0.95	5.4	5.7	40	3	●	¥4,500
GPDS0.96CBALT	0.96	5.4	5.7	40	3	●	¥4,500
GPDS0.97CBALT	0.97	5.4	5.7	40	3	●	¥4,500
GPDS0.98CBALT	0.98	5.4	5.7	40	3	●	¥4,500
GPDS0.99CBALT	0.99	5.4	5.7	40	3	●	¥4,500
GPDS1CBALT	1	6	6.3	50	3	●	¥3,500
GPDS1.05CBALT	1.05	6	6.3	50	3	●	¥5,000
GPDS1.1CBALT	1.1	6	6.3	50	3	●	¥4,000
GPDS1.15CBALT	1.15	6	6.3	50	3	●	¥5,000
GPDS1.2CBALT	1.2	7.2	7.6	50	3	●	¥4,000
GPDS1.25CBALT	1.25	7.2	7.6	50	3	●	¥5,000
GPDS1.3CBALT	1.3	7.2	7.6	50	3	●	¥4,000
GPDS1.35CBALT	1.35	7.2	7.6	50	3	●	¥5,000
GPDS1.4CBALT	1.4	8.4	8.8	50	3	●	¥4,000
GPDS1.45CBALT	1.45	8.4	8.8	50	3	●	¥5,000
GPDS1.5CBALT	1.5	8.4	8.8	50	3	●	¥4,000
GPDS1.55CBALT	1.55	8.4	8.8	50	3	●	¥5,000
GPDS1.6CBALT	1.6	9.6	10.1	50	3	●	¥4,000
GPDS1.65CBALT	1.65	9.6	10.1	50	3	●	¥5,000
GPDS1.7CBALT	1.7	9.6	10.1	50	3	●	¥4,000
GPDS1.75CBALT	1.75	9.6	10.1	50	3	●	¥5,000
GPDS1.8CBALT	1.8	10.8	11.3	50	3	●	¥4,000
GPDS1.85CBALT	1.85	10.8	11.3	50	3	●	¥5,000
GPDS1.9CBALT	1.9	10.8	11.3	50	3	●	¥4,000
GPDS1.95CBALT	1.95	10.8	11.3	50	3	●	¥5,000
GPDS2CBALT	2	12	12.5	50	3	●	¥4,000
GPDS2.05CBALT	2.05	12	12.5	50	3	●	¥5,500
GPDS2.1CBALT	2.1	12	12.5	50	3	●	¥4,500
GPDS2.15CBALT	2.15	12	12.5	50	3	●	¥5,500
GPDS2.2CBALT	2.2	12	12.5	50	3	●	¥4,500
GPDS2.25CBALT	2.25	12	12.5	50	3	●	¥5,500

Stock ●... 標準在庫品 / Stocked

■被削材適合性 Suitability for Work Materials ◎...最適 The most suitable ○...適 Suitable △...可 Possible 無印 Blank...不可 Impossible

製品区分 Product	軟鋼 Mild Steel	炭素鋼 Carbon Steel	合金鋼 Alloy Steel	調質鋼 Heat treated Steel	工具鋼 Tool Steel	焼入れ鋼 Hardened Steel	ステンレス鋼 Stainless Steel	鋳鉄 Cast Iron	ダクタイル鋳鉄 Ductile Cast Iron	チタン合金 Titanium Alloy	アルミ合金 Aluminium Alloy	銅 Copper	プラスチック Plastic	セラミック etc. Ceramics etc.	
	SS	S45C	SCM SCR	SKD SKS	～40 HRC	～45 HRC	45～ HRC	SUS	FC	FDC		Al	Cu	マシナブル Machinable	ジルコニア Zirconia Glass
GPDS-CBALT	◎	◎	◎	◎	◎	○	△	◎	○	○	○	△	△	○	

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SHARPTOGLON
HARDCORNER
ROUNDING
CUTTER

JIT

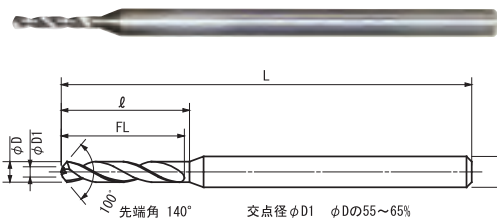
SUBMARINE
GATE
DRILLMICRO
TOOLTECHNICAL
INFOR-
MATIONCUSTOMIZED
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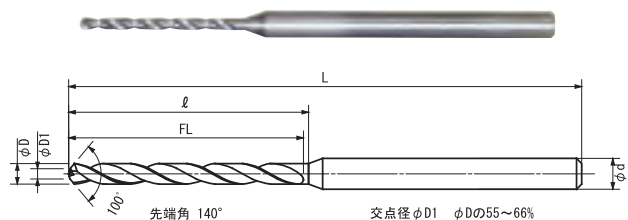
JIT

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PROFILEGPドリル ショート5D ALTコーティング
GP Drill Short 5D ALT coating

超硬 ALT Hi-SPEED SHANK h6 2枚刃 右刃 140° 100° 0.3~3.0

単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 l	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDS2.3CBALT	2.3	13.8	14.3	60	4	●	¥5,000
GPDS2.35CBALT	2.35	13.8	14.3	60	4	●	¥6,000
GPDS2.4CBALT	2.4	13.8	14.3	60	4	●	¥5,000
GPDS2.45CBALT	2.45	13.8	14.3	60	4	●	¥6,000
GPDS2.5CBALT	2.5	13.8	14.3	60	4	●	¥5,000
GPDS2.55CBALT	2.55	13.8	14.3	60	4	●	¥6,000
GPDS2.6CBALT	2.6	15.6	16.1	60	4	●	¥5,000
GPDS2.65CBALT	2.65	15.6	16.1	60	4	●	¥6,000
GPDS2.7CBALT	2.7	15.6	16.1	60	4	●	¥5,000
GPDS2.75CBALT	2.75	15.6	16.1	60	4	●	¥6,000
GPDS2.8CBALT	2.8	16.8	17.3	60	4	●	¥5,000
GPDS2.85CBALT	2.85	16.8	17.3	60	4	●	¥6,000
GPDS2.9CBALT	2.9	16.8	17.3	60	4	●	¥5,000
GPDS2.95CBALT	2.95	16.8	17.3	60	4	●	¥6,000
GPDS3CBALT	3	18	18.5	60	4	●	¥4,500

GPドリル レギュラー10D ALTコーティング
GP Drill Regular 10D ALT coating

超硬 ALT Hi-SPEED SHANK h6 2枚刃 右刃 140° 100° 0.3~3.0

単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 l	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDR0.3CBALT	0.3	3.6	3.7	40	3	●	¥4,500
GPDR0.31CBALT	0.31	3.6	3.7	40	3	●	¥5,500
GPDR0.32CBALT	0.32	3.6	3.7	40	3	●	¥5,500
GPDR0.33CBALT	0.33	3.6	3.7	40	3	●	¥5,500
GPDR0.34CBALT	0.34	3.6	3.7	40	3	●	¥5,500
GPDR0.35CBALT	0.35	4.2	4.3	40	3	●	¥5,500
GPDR0.36CBALT	0.36	4.2	4.3	40	3	●	¥5,500
GPDR0.37CBALT	0.37	4.2	4.3	40	3	●	¥5,500
GPDR0.38CBALT	0.38	4.2	4.3	40	3	●	¥5,500
GPDR0.39CBALT	0.39	4.2	4.3	40	3	●	¥5,500
GPDR0.4CBALT	0.4	4.8	4.9	40	3	●	¥4,500
GPDR0.41CBALT	0.41	4.8	4.9	40	3	●	¥5,500
GPDR0.42CBALT	0.42	4.8	4.9	40	3	●	¥5,500
GPDR0.43CBALT	0.43	4.8	4.9	40	3	●	¥5,500
GPDR0.44CBALT	0.44	4.8	4.9	40	3	●	¥5,500
GPDR0.45CBALT	0.45	5.4	5.5	40	3	●	¥5,500
GPDR0.46CBALT	0.46	5.4	5.5	40	3	●	¥5,500
GPDR0.47CBALT	0.47	5.4	5.5	40	3	●	¥5,500
GPDR0.48CBALT	0.48	5.4	5.5	40	3	●	¥5,500
GPDR0.49CBALT	0.49	5.4	5.5	40	3	●	¥5,500
GPDR0.5CBALT	0.5	6	6.2	40	3	●	¥4,000
GPDR0.51CBALT	0.51	6	6.2	40	3	●	¥5,000
GPDR0.52CBALT	0.52	6	6.2	40	3	●	¥5,000
GPDR0.53CBALT	0.53	6	6.2	40	3	●	¥5,000
GPDR0.54CBALT	0.54	6	6.2	40	3	●	¥5,000
GPDR0.55CBALT	0.55	6	6.2	40	3	●	¥5,000
GPDR0.56CBALT	0.56	6	6.2	40	3	●	¥5,000
GPDR0.57CBALT	0.57	6	6.2	40	3	●	¥5,000
GPDR0.58CBALT	0.58	6	6.2	40	3	●	¥5,000
GPDR0.59CBALT	0.59	6	6.2	40	3	●	¥5,000
GPDR0.6CBALT	0.6	7.2	7.4	40	3	●	¥4,000
GPDR0.61CBALT	0.61	7.2	7.4	40	3	●	¥5,000
GPDR0.62CBALT	0.62	7.2	7.4	40	3	●	¥5,000
GPDR0.63CBALT	0.63	7.2	7.4	40	3	●	¥5,000
GPDR0.64CBALT	0.64	7.2	7.4	40	3	●	¥5,000
GPDR0.65CBALT	0.65	7.2	7.4	40	3	●	¥5,000
GPDR0.66CBALT	0.66	7.2	7.4	40	3	●	¥5,000

Stock ●... 標準在庫品 / Stocked

■被削材適合性 Suitability for Work Materials ◎...最適 The most suitable ○...適 Suitable △...可 Possible 無印 Blank...不可 Impossible

製品区分 Product	軟鋼 Mild Steel	炭素鋼 Carbon Steel	合金鋼 Alloy Steel	調質鋼 Heat treated Steel	工具鋼 Tool Steel	焼入れ鋼 Hardened Steel	ステンレス鋼 Stainless Steel	鋳鉄 Cast Iron	ダクタイル鋳鉄 Ductile Cast Iron	チタン合金 Titanium Alloy	アルミ合金 Aluminium Alloy	銅 Copper	プラスチック Plastic	セラミック etc. Ceramics etc.
	SS	S45C	SCM SCR	SKD SKS	~40 HRC	~45 HRC 45~ HRC	SUS	FC	FDC		Al	Cu		マシナブル Machinable ジルコニア ガラス Zirconia Glass
GPDS-CBALT	◎	◎	◎	◎	◎	○	◎	○	○	○	△	△	△	○
GPDR-CBALT	◎	◎	◎	◎	◎	○	◎	○	○	○	△	△	△	○

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RUCTIONCOMPANY
PROFILE単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 ℓ	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDR0.67CBALT	0.67	7.2	7.4	40	3	●	¥5,000
GPDR0.68CBALT	0.68	7.2	7.4	40	3	●	¥5,000
GPDR0.69CBALT	0.69	7.2	7.4	40	3	●	¥5,000
GPDR0.7CBALT	0.7	8.4	8.6	40	3	●	¥4,000
GPDR0.71CBALT	0.71	8.4	8.6	40	3	●	¥5,000
GPDR0.72CBALT	0.72	8.4	8.6	40	3	●	¥5,000
GPDR0.73CBALT	0.73	8.4	8.6	40	3	●	¥5,000
GPDR0.74CBALT	0.74	8.4	8.6	40	3	●	¥5,000
GPDR0.75CBALT	0.75	8.4	8.6	40	3	●	¥5,000
GPDR0.76CBALT	0.76	8.4	8.6	40	3	●	¥5,000
GPDR0.77CBALT	0.77	8.4	8.6	40	3	●	¥5,000
GPDR0.78CBALT	0.78	8.4	8.6	40	3	●	¥5,000
GPDR0.79CBALT	0.79	8.4	8.6	40	3	●	¥5,000
GPDR0.8CBALT	0.8	9.6	9.8	40	3	●	¥4,000
GPDR0.81CBALT	0.81	9.6	9.8	40	3	●	¥5,000
GPDR0.82CBALT	0.82	9.6	9.8	40	3	●	¥5,000
GPDR0.83CBALT	0.83	9.6	9.8	40	3	●	¥5,000
GPDR0.84CBALT	0.84	9.6	9.8	40	3	●	¥5,000
GPDR0.85CBALT	0.85	9.6	9.8	40	3	●	¥5,000
GPDR0.86CBALT	0.86	9.6	9.8	40	3	●	¥5,000
GPDR0.87CBALT	0.87	9.6	9.8	40	3	●	¥5,000
GPDR0.88CBALT	0.88	9.6	9.8	40	3	●	¥5,000
GPDR0.89CBALT	0.89	9.6	9.8	40	3	●	¥5,000
GPDR0.9CBALT	0.9	10.8	11.1	40	3	●	¥4,000
GPDR0.91CBALT	0.91	10.8	11.1	40	3	●	¥5,000
GPDR0.92CBALT	0.92	10.8	11.1	40	3	●	¥5,000
GPDR0.93CBALT	0.93	10.8	11.1	40	3	●	¥5,000
GPDR0.94CBALT	0.94	10.8	11.1	40	3	●	¥5,000
GPDR0.95CBALT	0.95	10.8	11.1	40	3	●	¥5,000
GPDR0.96CBALT	0.96	10.8	11.1	40	3	●	¥5,000
GPDR0.97CBALT	0.97	10.8	11.1	40	3	●	¥5,000
GPDR0.98CBALT	0.98	10.8	11.1	40	3	●	¥5,000
GPDR0.99CBALT	0.99	10.8	11.1	40	3	●	¥5,000
GPDR1CBALT	1	12	12.3	50	3	●	¥4,000
GPDR1.05CBALT	1.05	12	12.3	50	3	●	¥5,500
GPDR1.1CBALT	1.1	12	12.3	50	3	●	¥4,500
GPDR1.15CBALT	1.15	12	12.3	50	3	●	¥5,500

単位/寸法:mm 価格:円
Unit/Size:mm Price:JPY

VAN Code No.	直径 φD	有効溝長 FL	刃長 ℓ	全長 L	シャンク径 φd	在庫 Stock	参考価格 Price
GPDR1.2CBALT	1.2	14.4	14.8	50	3	●	¥4,500
GPDR1.25CBALT	1.25	14.4	14.8	50	3	●	¥5,500
GPDR1.3CBALT	1.3	14.4	14.8	50	3	●	¥4,500
GPDR1.35CBALT	1.35	14.4	14.8	50	3	●	¥5,500
GPDR1.4CBALT	1.4	16.8	17.2	50	3	●	¥4,500
GPDR1.45CBALT	1.45	16.8	17.2	50	3	●	¥5,500
GPDR1.5CBALT	1.5	16.8	17.2	50	3	●	¥4,500
GPDR1.55CBALT	1.55	16.8	17.2	50	3	●	¥5,500
GPDR1.6CBALT	1.6	19.2	19.7	50	3	●	¥4,500
GPDR1.65CBALT	1.65	19.2	19.7	50	3	●	¥5,500
GPDR1.7CBALT	1.7	19.2	19.7	50	3	●	¥4,500
GPDR1.75CBALT	1.75	19.2	19.7	50	3	●	¥5,500
GPDR1.8CBALT	1.8	21.6	22.1	50	3	●	¥4,500
GPDR1.85CBALT	1.85	21.6	22.1	50	3	●	¥5,500
GPDR1.9CBALT	1.9	21.6	22.1	50	3	●	¥4,500
GPDR1.95CBALT	1.95	21.6	22.1	50	3	●	¥5,500
GPDR2CBALT	2	24	24.5	60	3	●	¥4,500
GPDR2.05CBALT	2.05	24	24.5	60	3	●	¥6,000
GPDR2.1CBALT	2.1	24	24.5	60	3	●	¥5,000
GPDR2.15CBALT	2.15	24	24.5	60	3	●	¥6,000
GPDR2.2CBALT	2.2	24	24.5	60	3	●	¥5,000
GPDR2.25CBALT	2.25	24	24.5	60	3	●	¥6,000
GPDR2.3CBALT	2.3	27.6	28.1	60	4	●	¥5,500
GPDR2.35CBALT	2.35	27.6	28.1	60	4	●	¥6,500
GPDR2.4CBALT	2.4	27.6	28.1	60	4	●	¥5,500
GPDR2.45CBALT	2.45	27.6	28.1	60	4	●	¥6,500
GPDR2.5CBALT	2.5	27.6	28.1	60	4	●	¥5,500
GPDR2.55CBALT	2.55	27.6	28.1	60	4	●	¥6,500
GPDR2.6CBALT	2.6	31.2	31.7	60	4	●	¥5,500
GPDR2.65CBALT	2.65	31.2	31.7	60	4	●	¥6,500
GPDR2.7CBALT	2.7	31.2	31.7	60	4	●	¥5,500
GPDR2.75CBALT	2.75	31.2	31.7	60	4	●	¥6,500
GPDR2.8CBALT	2.8	33.6	34.1	60	4	●	¥5,500
GPDR2.85CBALT	2.85	33.6	34.1	60	4	●	¥6,500
GPDR2.9CBALT	2.9	33.6	34.1	60	4	●	¥5,500
GPDR2.95CBALT	2.95	33.6	34.1	60	4	●	¥6,500
GPDR3CBALT	3	36	36.5	60	4	●	¥5,000

Stock ●... 標準在庫品 / Stocked

■被削材適合性 Suitability for Work Materials ◎...最適 The most suitable ○...適 Suitable △...可 Possible 無印 Blank...不可 Impossible

製品区分 Product	軟鋼 Mild Steel	炭素鋼 Carbon Steel	合金鋼 Alloy Steel	調質鋼 Heat treated Steel	工具鋼 Tool Steel	焼入れ鋼 Hardened Steel	ステンレス鋼 Stainless Steel	鋳鉄 Cast Iron	ダクタイル鋳鉄 Ductile Cast Iron	チタン合金 Titanium Alloy	アルミ合金 Aluminium Alloy	銅 Copper	プラスチック Plastic	セラミック etc. Ceramics etc.	
	SS	S45C	SCM SCR	SKD SKS	～40 HRC	～45 HRC 45～ HRC	SUS	FC	FDC		Al	Cu		マシナブル Machinable	ジルコニア ガラス Zirconia Glass
GPDR-CBALT	◎	◎	◎	◎	◎	○ △	◎	○	○	○	△	△	△	○	

SP
CENTERCENTER
DRILLGSS
STARTING
DRILLGP
DRILL

TFD

SPIRAL
GUN
BARREL
DRILLTOGLON
MULTI
CHAMFERTOGLON
SHARPTOGLON
HARDCORNER
ROUNDING
CUTTER

JIT

SUBMARINE
GATE
DRILLMICRO
TOOLTECHNICAL
INFOR-
MATIONCUSTOMIZED
TOOL
SEMORDER
TOOLINST-
RUCTIONCOMPANY
PROFILE

GPドリル 切削条件表 GP Drill Recommended Drilling Condition

被削材 WORK MATERIAL	S55C High speed mode				NAK55 HRC37				SUS				SCM440			
ドリル径 DIAMETER mm	切削速度 CUTTING SPEED m/min	回転数 SPEED min ⁻¹	送り量 FEED mm	送り速度 FEED SPEED mm/min	切削速度 CUTTING SPEED m/min	回転数 SPEED min ⁻¹	送り量 FEED mm	送り速度 FEED SPEED mm/min	切削速度 CUTTING SPEED m/min	回転数 SPEED min ⁻¹	送り量 FEED mm	送り速度 FEED SPEED mm/min	切削速度 CUTTING SPEED m/min	回転数 SPEED min ⁻¹	送り量 FEED mm	送り速度 FEED SPEED mm/min
0.3	55	58,400	0.01	580	17	18,000	0.005	90	17	18,000	0.01	110	45	47,700	0.01	480
0.4	60	47,700	0.02	720	18	14,300	0.007	100	18	14,300	0.01	110	50	39,800	0.02	600
0.5	65	41,400	0.02	830	20	12,700	0.01	130	20	12,700	0.01	150	55	35,000	0.02	700
0.7	70	31,800	0.05	1,590	22	10,000	0.016	160	22	10,000	0.02	200	60	27,300	0.04	960
1	80	25,500	0.08	2,040	25	8,000	0.025	200	25	8,000	0.03	240	70	22,300	0.05	1,120
1.5	80	17,000	0.1	1,700	25	5,300	0.035	190	25	5,300	0.04	210	70	14,900	0.07	970
2	80	12,700	0.12	1,520	25	4,000	0.04	160	25	4,000	0.06	220	70	11,100	0.08	890
3	80	8,500	0.15	1,280	25	2,700	0.05	140	25	2,700	0.07	190	70	7,400	0.11	810

切削条件設定上の注意点 Please observe when choosing the cutting conditions

- 上記はあくまでも目安です。状況に応じて変更して下さい。
- 高速加工用のドリルです。一般的な加工条件で加工することは可能ですが、高速加工を行うことにより、最大1.5～2倍の寿命が得られます。
- 上記最大回転数の60%を超えるような条件で使用する場合は、水溶性切削油剤をご使用ください。それ以下の場合はオイルミストでも対応可能です。
- 上記切削条件が加工機械の上限回転数を超える場合は、ご使用のスピンドル精度が安定する領域での高い回転数でご使用下さい。
- 次の場合は送り条件を下げて下さい。
 - ワーク、チャッキング、機械剛性の悪い場合
- 工具径0.5mm以下の場合や、ステンレス鋼、調質鋼を加工の際は、必要に応じてステップ加工を行ってください。
- 炭素鋼、合金鋼の高速加工（切削速度が60m/min、送り量が加工径の10%を超える条件）を行う場合、穴深さが径の3倍までの加工ではノンステップ加工を推奨します。
- 本工具のコーティングは通電性が悪いいため、通電方式の工具長測定装置をご使用の際はご注意ください。

- The above values are standard conditions. They need to be adapted for optimal use of the tools.
- This drill is for high speed processing. It is possible to process by general cutting condition, however, tool life will be 1.5~2times when you do high speed processing.
- When the condition is over 60% of upon max speed, please use water-soluble cutting oil. If the speed is lower, you are possible to use oil mist.
- If the recommended cutting speed exceeds the maximum speed of the machine used please use the maximum speed of the machine and adjust the other work parameters accordingly.
- Please lower the speed when working conditions are not stable (vibrations, moving of work piece, etc.)
- Please do step drilling method; diameter 1/10~1/2 as appropriate if the tool diameter is under 0.5mm, processing stainless steel or Heat treated steel.
- When Carbon steel, Alloy steel is high-speed processed (cutting speed 60m/min, feed rate is over 10% of processing diameter), we recommend non-step processing if the depth is 3times of diameter.
- Please give it attention when you use measuring instrument which is electric current supply system, because coating of this tool is difficult to turn on electricity.