

B7 DRILL

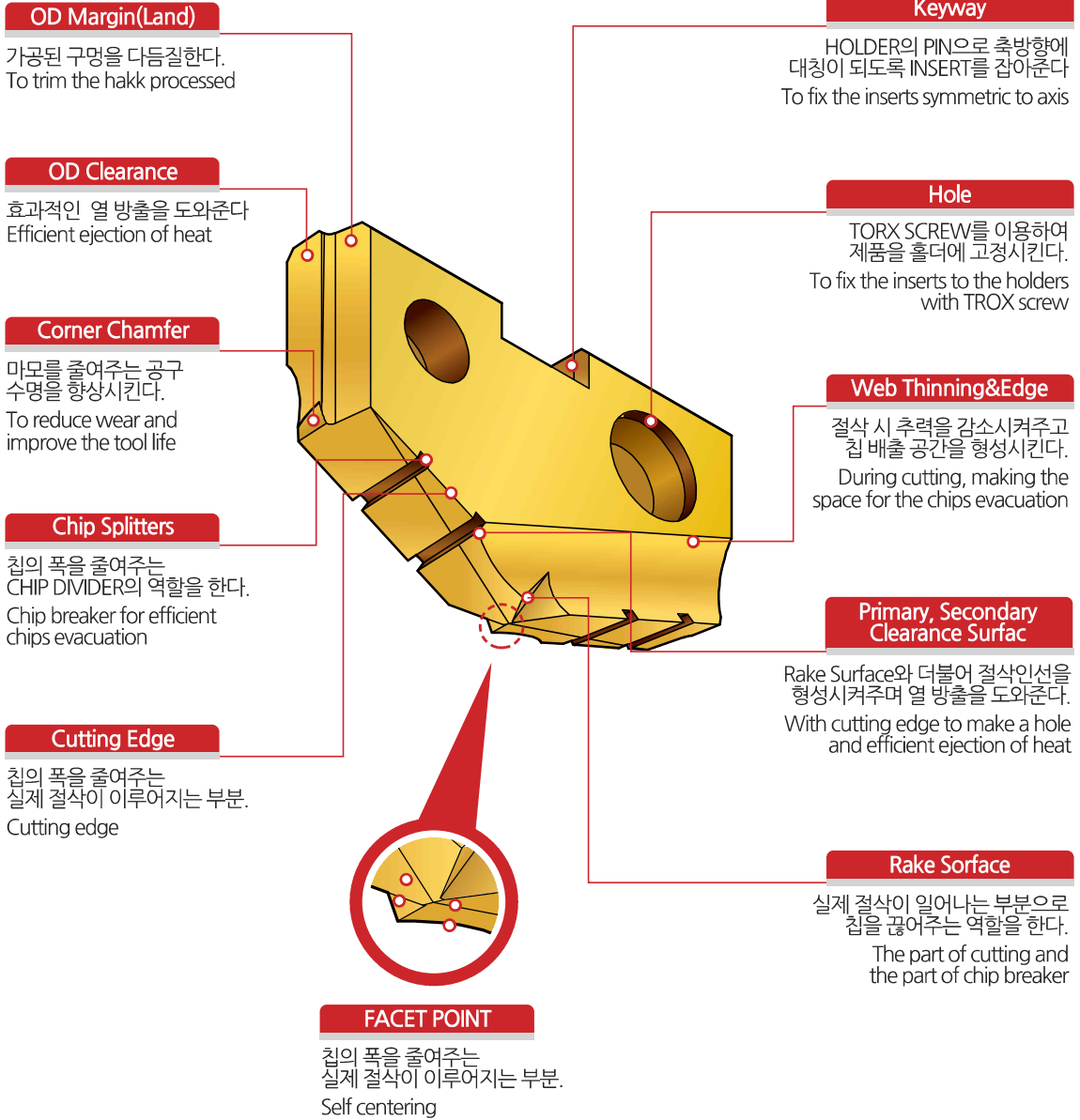
SPADE DRILL



B7 드릴 인서트 B7 Drill Insert

인서트 각부 명칭 및 기능

Insert each name and function



B7 드릴 인서트 규격 B7 Drill Insert Description

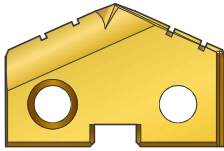
48

3

A - 460

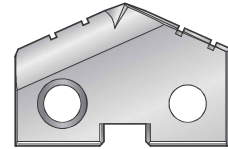
Material 소재		Series 시리즈			Coating 코팅		Diameter 가공경	
04 - M4	HSS	Y	ø9.5 ~ ø11.0	4	ø48.0 ~ ø65.0	A	TiALN	Inch
48 - M48	Premium HSS	Z	ø11.5 ~ ø12.5	5	ø63.5 ~ ø76.0	C	TiCN	Metric
P2 - P25	Carbide	0	ø13.0 ~ ø17.5	6	ø78.0 ~ ø88.0	T	TiN	Special
		1	ø18.0 ~ ø24.0	7	ø90.0 ~ ø100.0	i	ALTiN	
		2	ø25.0 ~ ø35.0	8	ø102.0 ~ ø114.0			
		3	ø36.0 ~ ø47.0					

TiN



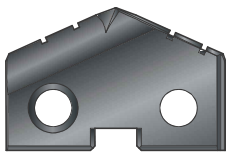
- 범용 코팅 General purpose coating
- 공구 수명 향상 Improved tool life over a noncoated insert
- 알루미늄 작업에 탁월 Excellent choice for Aluminium
- Color : Gold / Yellow

TiCN



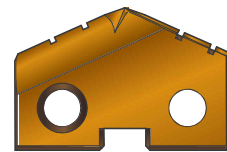
- 고속 가공시 발생하는 마모 저항에 탁월한 성능
Excellent choice for wear resistance over low surface speeds
- 고강도 / 마모방지 High hardness / wear resistance
- 400°C까지 작업가능 Maximum working temperature 400
- 경도 HV3500 Hardness HV3500
- Color : Blue / Grey

TiALN



- 고속 가공시 발생하는 마모 저항에 탁월한 성능
Excellent choice for wear resistance over low surface speeds
- 산화 저항 우수 Excellent oxidation resistance
- 800°C까지 작업가능 Maximum working temperature 800
- 경도 HV3000 Hardness HV3000
- Color : Violet / Black

Alpha



- 작업시 발생하는 열 저항이 TiN, TiCN 보다 우수
First choice for increased heat resistance over TiN, TiCN
- 타 코팅보다 우수한 공구 수명과 시장 진입의 우수성
Allows for improved tool life and higher penetration rates of the market
- TiALN 코팅보다 20% 이상 공구수명 연장
Over 20% increased tool life over TiAN
- Color : Copper / Bronze

HSS(M4) standard stock

일반강 및 주철에 사용. Applied for steels and cast Iron.

Premium HSS(M48) standard stock

고경도합금 및 경도 재질에 350~500Bhn(HRC37~49)의 사용.
Applied for high temp Alloy and 350~500Bhn(HRC37~49) and harder 9.5mm to 114.00mm

Carbide(P25) standard stock

일반탄소강, 합금강 및 난삭재에 사용.
Applied for Carbon Steel, Alloy Steel and Hard to Machine Material (Titanium and Stainless Steel)
13.00mm to 47.00mm

B7 드릴 홀더 규격 B7 Drill Holder Description

B7 **S** - **115** **125** **134**

드릴종류 드릴종류 최소 가공직경 Ø11.5 최대 가공직경 Ø12.5 드릴전장 134mm
 Drill group Drill type Min drilling diameter Ø11.5 Max drilling diameter Ø12.5 Total length 134mm



B7K



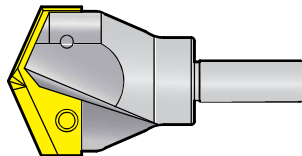
B7S



B7H



B7M



B7X

- 다양한 드릴홀더를 보유하고 있어 1.5D~3D까지 홀 가공이 용이합니다.
Possible to make a hole 1.5D to 3D with a various range of drills.
- 인서트형으로 9.5mm~114mm까지 표준형으로 제작되어 있어 사용이 편리합니다.
As indexable type of drill, composed of a various range of diameters from 9.5mm to 114mm, it is very convenient to use.
- 칩 분할 홈이 있어서 칩 처리가 용이하고 파워가 약한 기계에서도 대구경 드릴작업이 가능합니다.
Chip splitters is able to be used for chip evacuation and the weak-powered machine.
- 재고 관리가 용이, 홀더9개(Y,Z,0,1,2,3,4,5~6,7~8)로 9.5mm~114mm까지의 드릴작업이 가능.
Efficient management for the stock levels, Only nine holders can make holes 9.5mm to 114mm

Stub(Extra Short)	1.5~2D
Short	3~4D
Intermediate	5~6D
Standard	7~8D
Extended	8~12D
Long	11~14D
XL(Extra long)	20~25D
3XL(Extra long)	25~30D

Y	Z	0	1	2	3	4	5,6	7,8
9.5 ~ 11.0	11.5 ~ 12.5	13.0 ~ 17.54	18.0 ~ 24.0	25.0 ~ 35.0	36.0 ~ 47.0	48.0 ~ 65.0	64.0 ~ 88.0	90.0 ~ 114.0

- Solid type 드릴에 비해 진원도 및 가공치수 정도가 우수하며 수명도 탁월함.
Good performance and great tool life compared with solid type drill.
- 인선에 절삭유 공급이 용이.
Easy to supply the coolant inside of the hole processing
- 모듈라 시스템 드릴은 길이를 자유자제로 조정할수 있습니다.
A variety of length of drills with modular systems.

HSS(M48) Insert

Series	Metric (mm)	Tin	Ticn	Tialn	Altin
Y, Z	9.5~12.5				
0	13.0~17.5				
1	18.0~24.5				
2	25.0~35.0				
3	35.5~47.0				
4	48.0~65.0				

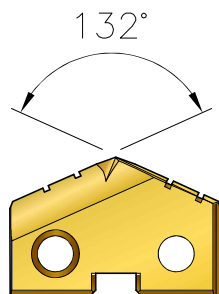
HSS(M4) Insert

Series	Metric (mm)	Tin	Ticn	Tialn	Altin
5	64.0~76.0				
6	78.0~88.0				
7	90.0~100				
8	102.0~114.0				





Carbide B7 Insert

Series	Metric (mm)	Altin
0	13.0 ~ 17.0	
1	18.0 ~ 24.0	
2	25.0 ~ 35.0	
3	36.0 ~ 47.0	

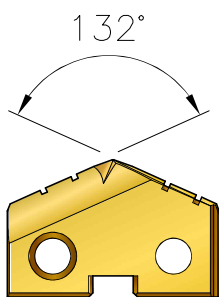
HSS B7 드릴 인서트 Y 시리즈 HSS B7 Drill Insert Y Series







9.5mm(.3740")~11mm(.4331")

Diameter						
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
3/8"	9.5	.3740"	48YT-0095M	48YC-0095M	48YA-0095M	48Yi-0095M
	9.53	.3750"	48YT-03750	48YC-03750	48YA-03750	48Yi-03750
25/64"	9.80	.3860"	48YT-03860	48YC-03860	48YA-03860	48Yi-03860
	9.92	.3906"	48YT-03906	48YC-03906	48YA-03906	48Yi-03906
13/32"	10.00	.3937"	48YT-0100M	48YC-0100M	48YA-0100M	48Yi-0100M
	10.20	.4016"	48YT-04016	48YC-04016	48YA-04016	48Yi-04016
	10.32	.4063"	48YT-04063	48YC-04063	48YA-04063	48Yi-04063
27/64"	10.50	.4134"	48YT-0105M	48YC-0105M	48YA-0105M	48Yi-0105M
	10.72	.4219"	48YT-04219	48YC-04219	48YA-04219	48Yi-04219
11.00	10.80	.4252"	48YT-04252	48YC-04252	48YA-04252	48Yi-04252
	11.00	.4331"	48YT-0110M	48YC-0110M	48YA-0110M	48Yi-0110M

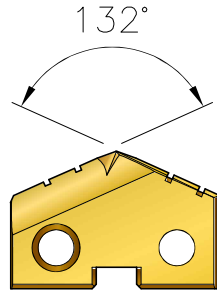
HSS B7 드릴 인서트 Z 시리즈 HSS B7 Drill Insert Z Series







11.11mm(.4375")~12.70mm(.5000")

Diameter						
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
7/16"	11.11	.4375"	48ZT-04375	48ZC-04375	48ZA-04375	48Zi-04375
	11.50	.4528"	48ZT-0115M	48ZC-0115M	48ZA-0115M	48Zi-0115M
29/64"	11.51	.4531"	48ZT-04531	48ZC-04531	48ZA-04531	48Zi-04531
15/32"	11.91	.4688"	48ZT-04688	48ZC-04688	48ZA-04688	48Zi-04688
	12.00	.4724"	48ZT-0120M	48ZC-0120M	48ZA-0120M	48Zi-0120M
31/64"	12.30	.4844"	48ZT-04844	48ZC-04844	48ZA-04844	48Zi-04844
	12.50	.4921"	48ZT-0125M	48ZC-0125M	48ZA-0125M	48Zi-0125M
1/2"	12.70	.5000"	48ZT-05000	48ZC-05000	48ZA-05000	48Zi-05000

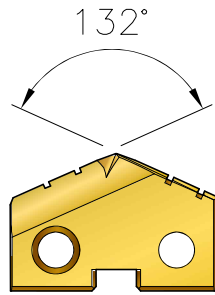
Carbide, HSS B7 드릴 인서트 O 시리즈 Carbide, HSS B7 Drill Insert O Series




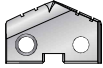


13mm(.5118")~17.5mm(.6890")

Diameter							
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Carbide (P25)
	13.00	.5118"	480T-0130M	480C-0130M	480A-0130M	480i-0130M	P20i-0130M
33/64"	13.10	.5156"	480T-05156	480C-05156	480A-05156	480i-05156	P20i-05156
17/32"	13.49	.5313"	480T-05313	480C-05313	480A-05313	480i-05313	P20i-05313
	13.50	.5315"	480T-0135M	480C-0135M	480A-0135M	480i-0135M	P20i-0135M
35/64"	13.89	.5469"	480T-05469	480C-05469	480A-05469	480i-05469	P20i-05469
	14.00	.5512"	480T-0140M	480C-0140M	480A-0140M	480i-0140M	P20i-0140M
9/16"	14.29	.5625"	480T-05625	480C-05625	480A-05625	480i-05625	P20i-05625
	14.50	.5709"	480T-0145M	480C-0145M	480A-0145M	480i-0145M	P20i-0145M
37/64"	14.68	.5781"	480T-05781	480C-05781	480A-05781	480i-05781	P20i-05781
	15.00	.5906"	480T-0150M	480C-0150M	480A-0150M	480i-0150M	P20i-0150M
19/32"	15.08	.5938"	480T-05938	480C-05938	480A-05938	480i-05469	P20i-05469
39/64"	15.48	.6094"	480T-06094	480C-06094	480A-06094	480i-06094	P20i-06094
	15.50	.6102"	480T-0155M	480C-0155M	480A-0155M	480i-0155M	P20i-0155M
5/8"	15.88	.6250"	480T-06250	480C-06250	480A-06250	480i-06250	P20i-06250
	16.00	.6299"	480T-0160M	480C-0160M	480A-0160M	480i-0160M	P20i-0160M
41/64"	16.27	.6406"	480T-06406	480C-06406	480A-06406	480i-06406	P20i-06406
	16.50	.6496"	480T-0165M	480C-0165M	480A-0165M	480i-0165M	P20i-0165M
21/32"	16.67	.6563"	480T-06563	480C-06563	480A-06563	480i-06563	P20i-06563
	17.00	.6693"	480T-0170M	480C-0170M	480A-0170M	480i-0170M	P20i-0170M
43/64"	17.07	.6719"	480T-06719	480C-06719	480A-06719	480i-06719	P20i-06719
11/16"	17.46	.6875"	480T-06875	480C-06875	480A-06875	480i-06875	P20i-06875
	17.50	.6890"	480T-0175M	480C-0175M	480A-0175M	480i-0175M	P20i-0175M

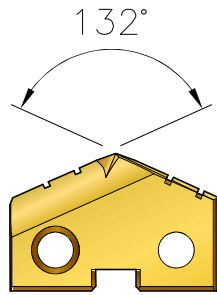
Carbide, HSS B7 드릴 인서트 1 시리즈 Carbide, HSS B7 Drill Insert 1 Series







17.86mm(.7031")~24mm(.9449")

Diameter							
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Carbide (P25)
45/64"	17.86	.7031"	481T-07031	481C-07031	481A-07031	481i-07031	P21i-07031
	18.00	.7087"	481T-0180M	481C-0180M	481A-0180M	481i-0180M	P21i0180M
23/32"	18.26	.7188"	481T-07188	481C-07188	481A-07188	481i-07188	P21i-07188
	18.50	.7283"	481T-0185M	481C-0185M	481A-0185M	481i-0185M	P21i-0185M
47/64"	18.65	.7344"	481T-07344	481C-07344	481A-07344	481i-07344	P21i-07344
	19.00	.7480"	481T-0190M	481C-0190M	481A-0190M	481i-0190M	P21i-0190M
3/4"	19.05	.7500"	481T-07500	481C-07500	481A-07500	481i-07500	P21i-07500
49/64"	19.45	.7656"	481T-07656	481C-07656	481A-07656	481i-07656	P21i-07656
	19.50	.7677"	481T-0195M	481C-0195M	481A-0195M	481i-0195M	P21i-0195M
25/32"	19.84	.7813"	481T-07813	481C-07813	481A-07813	481i-07813	P21i-07813
	20.00	.7874"	481T-0200M	481C-0200M	481A-0200M	481i-0200M	P21i-0200M
51/64"	20.24	.7969"	481T-07969	481C-07969	481A-07969	481i-07969	P21i-07969
	20.50	.8071"	481T-0205M	481C-0205M	481A-0205M	481i-0205M	P21i-0205M
13/16"	20.64	.8125"	481T-08125	481C-08125	481A-08125	481i-08125	P21i-08125
	21.00	.8268"	481T-0210M	481C-0210M	481A-0210M	481i-0210M	P21i-0210M
27/32"	21.43	.8438"	481T-08438	481C-08438	481A-08438	481i-08438	P21i-08438
	21.50	.8465"	481T-0215M	481C-0215M	481A-0215M	481i-0215M	P21i-0215M
55/64"	21.83	.8594"	481T-08594	481C-08594	481A-08594	481i-08594	P21i-08594
	22.00	.8661"	481T-0220M	481C-0220M	481A-0220M	481i-0220M	P21i-0220M
7/8"	22.23	.8750"	481T-08750	481C-08750	481A-08750	481i-08750	P21i-08750
	22.50	.8858"	481T-0225M	481C-0225M	481A-0225M	481i-0225M	P21i-0225M
57/64"	22.62	.8906"	481T-08906	481C-08906	481A-08906	481i-08906	P21i-08906
	23.00	.9055"	481T-0230M	481C-0230M	481A-0230M	481i-0230M	P21i-0230M
29/32"	23.02	.9063"	481T-09063	481C-09063	481A-0235M	481i-0235M	P21i-0235M
59/64"	23.42	.9219"	481T-09219	481C-09219	481A-09219	481i-09219	P21i-09219
	23.50	.9252"	481T-0235M	481C-0235M	481A-0235M	481i-0235M	P21i-0235M
15/16"	23.81	.9375"	481T-09375	481C-09375	481A-09375	481i-09375	P21i-09375
	24.00	.9449"	481T-0240M	481C-0240M	481A-0240M	481i-0240M	P21i-0240M

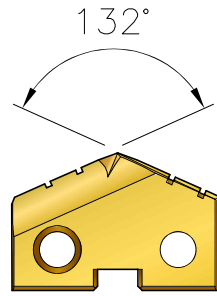
Carbide, HSS B7 드릴 인서트 2 시리즈 Carbide, HSS B7 Drill Insert 2 Series







24.5mm(0.9646")~35.0mm(1.3780")

Diameter							
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Carbide (P25)
31/32"	24.50	.9646"	482T-0245M	482C-0245M	482A-0245M	482i-0245M	P22i-0245M
	24.61	.9688"	482T-09688	482C-09688	482A-09688	482i-09688	P22i-09688
63/64"	24.85	.9783"	482T-02485	482C-02485	482A-02485	482i-02485	P22i-02485
	25.00	.9843"	482T-0250M	482C-0250M	482A-0250M	482i-0250M	P22i-0250M
1"	25.40	1.0000"	482T-10000	482C-10000	482A-10000	482i-10000	P22i-10000
	25.50	1.0039"	482T-0255M	482C-0255M	482A-0255M	482i-0255M	P22i-0255M
1-1/64"	25.80	1.0156"	482T-10156	482C-10156	482A-10156	482i-10156	P22i-10156
	26.00	1.0236"	482T-0260M	482C-0260M	482A-0260M	482i-0260M	P22i-0260M
1-1/32"	26.19	1.0313"	482T-10313	482C-10313	482A-10313	482i-10313	P22i-10313
	26.50	1.0431"	482T-0265M	482C-0265M	482A-0265M	482i-0265M	P22i-0265M
1-3/64"	26.59	1.0469"	482T-10469	482C-10469	482A-10469	482i-10469	P22i-10469
	26.99	1.0625"	482T-10625	482C-10625	482A-10625	482i-10625	P22i-10625
1-1/16"	27.00	1.0630"	482T-0270M	482C-0270M	482A-0270M	482i-0270M	P22i-0270M
	27.50	1.0827"	482T-0275M	482C-0275M	482A-0275M	482i-0275M	P22i-0275M
1-3/32"	27.78	1.0938"	482T-10938	482C-10938	482A-10938	482i-10938	P22i-10938
	28.00	1.1024"	482T-0280M	482C-0280M	482A-0280M	482i-0280M	P22i-0280M
1-7/64"	28.18	1.1094"	482T-11094	482C-11094	482A-11094	482i-11094	P22i-11094
	28.50	1.1220"	482T-0285M	482C-0285M	482A-0285M	482i-0285M	P22i-0285M
1-1/8"	28.58	1.1250"	482T-11250	482C-11250	482A-11250	482i-11250	P22i-11250
	29.00	1.1417"	482T-0290M	482C-0290M	482A-0290M	482i-0290M	P22i-0290M
1-5/32"	29.37	1.1563"	482T-11563	482C-11563	482A-11563	482i-11563	P22i-11563
	29.50	1.1614"	482T-0295M	482C-0295M	482A-0295M	482i-0295M	P22i-0295M
1-3/16"	30.00	1.1811"	482T-0300M	482C-0300M	482A-0300M	482i-0300M	P22i-0300M
	30.16	1.1875"	482T-11875	482C-11875	482A-11875	482i-11875	P22i-11875
1-7/32"	30.50	1.2008"	482T-0305M	482C-0305M	482A-0305M	482i-0305M	P22i-0305M
	30.96	1.2188"	482T-12188	482C-12188	482A-12188	482i-12188	P22i-12188
1-1/4"	31.00	1.2205"	482T-0310M	482C-0310M	482A-0310M	482i-0310M	P22i-0310M
	31.50	1.2402"	482T-0315M	482C-0315M	482A-0315M	482i-0315M	P22i-0315M
1-9/32"	31.75	1.2500"	482T-12500	482C-12500	482A-12500	482i-12500	P22i-12500
	32.00	1.2598"	482T-0320M	482C-0320M	482A-0320M	482i-0320M	P22i-0320M
1-5/16"	32.50	1.2795"	482T-0325M	482C-0325M	482A-0325M	482i-0325M	P22i-0325M
	32.54	1.2813"	482T-12813	482C-12813	482A-12813	482i-12813	P22i-12813
1-11/32"	33.00	1.2992"	482T-0330M	482C-0330M	482A-0330M	482i-0330M	P22i-0330M
	33.34	1.3125"	482T-13125	482C-13125	482A-13125	482i-13125	P22i-13125
1-3/8"	33.50	1.3187"	482T-0335M	482C-0335M	482A-0335M	482i-0335M	P22i-0335M
	34.00	1.3386"	482T-0340M	482C-0340M	482A-0340M	482i-0340M	P22i-0340M
1-5/8"	34.13	1.3438"	482T-13438	482C-13438	482A-13438	482i-13438	P22i-13438
	34.50	1.3583"	482T-0345M	482C-0345M	482A-0345M	482i-0345M	P22i-0345M
1-3/4"	34.93	1.3750"	482T-13750	482C-13750	482A-13750	482i-13750	P22i-13750
	35.00	1.3780"	482T-0350M	482C-0350M	482A-0350M	482i-0350M	P22i-0350M

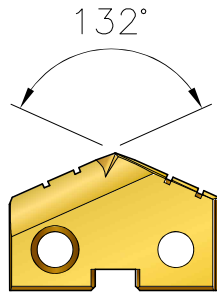
Carbide, HSS B7 드릴 인서트 3 시리즈 Carbide, HSS B7 Drill Insert 3 Series







35.5mm(1.3976")~47.63mm(1.8750")

Diameter							
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Carbide (P25)
	35.50	1.3976"	483T-0355M	483C-0355M	483A-0355M	483i-0355M	P23i-0355M
1-13/32"	35.72	1.4063"	483T-14063	483C-14063	483A-14063	483i-14063	P23i-14063
	36.00	1.4173"	483T-0360M	483C-0360M	483A-0360M	483i-0360M	P23i-0360M
	36.50	1.4370"	483T-0365M	483C-0365M	483A-0365M	483i-0365M	P23i-0365M
1-7/16"	36.51	1.4375"	483T-14375	483C-14375	483A-14375	483i-14375	P23i-14375
	37.00	1.4567"	483T-0370M	483C-0370M	483A-0370M	483i-0370M	P23i-0370M
1-15/32"	37.31	1.4688"	483T-14688	483C-14688	483A-14688	483i-14688	P23i-14688
	38.00	1.4961"	483T-0380M	483C-0380M	483A-0380M	483i-0380M	P23i-0380M
1-1/2"	38.10	1.5000"	483T-15000	483C-15000	483A-15000	483i-15000	P23i-15000
1-17/32"	38.89	1.5313"	483T-15313	483C-15313	483A-15313	483i-15313	P23i-15313
	39.00	1.5354"	483T-0390M	483C-0390M	483A-0390M	483i-0390M	P23i-0390M
1-9/16"	39.69	1.5625"	483T-15625	483C-15625	483A-15625	483i-15625	P23i-15625
	40.00	1.5748"	483T-0400M	483C-0400M	483A-0400M	483i-0400M	P23i-0400M
1-19/32"	40.48	1.5938"	483T-15938	483C-15938	483A-15938	483i-15938	P23i-15938
	41.00	1.6142"	483T-0410M	483C-0410M	483A-0410M	483i-0410M	P23i-0410M
1-5/8"	41.28	1.6250"	483T-16250	483C-16250	483A-16250	483i-16250	P23i-16250
	42.00	1.6535"	483T-0420M	483C-0420M	483A-0420M	483i-0420M	P23i-0420M
1-21/32"	42.07	1.6563"	483T-16563	483C-16563	483A-16563	483i-16563	P23i-16563
1-11/16"	42.86	1.6875"	483T-16875	483C-16875	483A-16875	483i-16875	P23i-16875
	43.00	1.6929"	483T-0430M	483C-0430M	483A-0430M	483i-0430M	P23i-0430M
1-23/32"	43.66	1.7188"	483T-17188	483C-17188	483A-17188	483i-17188	P23i-17188
	44.00	1.7323"	483T-0440M	483C-0440M	483A-0440M	483i-0440M	P23i-0440M
1-3/4"	44.45	1.7500"	483T-17500	483C-17500	483A-17500	483i-17500	P23i-17500
	45.00	1.7717"	483T-0450M	483C-0450M	483A-0450M	483i-0450M	P23i-0450M
1-25/32"	45.24	1.7813"	483T-17813	483C-17813	483A-17813	483i-17813	P23i-17813
	46.00	1.8110"	483T-0460M	483C-0460M	483A-0460M	483i-0460M	P23i-0460M
1-13/16"	46.04	1.8125"	483T-18125	483C-18125	483A-18125	483i-18125	P23i-18125
1-27/32"	46.83	1.8438"	483T-18438	483C-18438	483A-18438	483i-18438	P23i-18438
	47.00	1.8504"	483T-0470M	483C-0470M	483A-0470M	483i-0470M	P23i-0470M
1-7/8"	47.63	1.8750"	483T-18750	483C-18750	483A-18750	483i-18750	P23i-18750

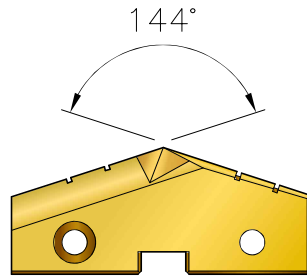
HSS B7 드릴 인서트 4 시리즈 HSS B7 Drill Insert 4 Series




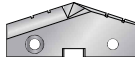


48mm(1.8898")~65.09mm(2.5625")

Diameter			 Tin	 TiCN	 TiALN	 Alpha
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
	48.00	1.8898"	484T-0480M	484C-0480M	484A-0480M	484i-0480M
1-29/32"	48.42	1.9063"	484T-19063	484C-19063	484A-19063	484i-19063
	49.00	1.9291"	484T-0490M	484C-0490M	484A-0490M	484i-0490M
1-15/16"	49.21	1.9375"	484T-19375	484C-19375	484A-19375	484i-19375
	50.00	1.9685"	484T-0500M	484C-0500M	484A-0500M	484i-0500M
1-31/32"	50.01	1.9688"	484T-19688	484C-19688	484A-19688	484i-19688
2"	50.80	2.0000"	484T-20000	484C-20000	484A-20000	484i-20000
	51.00	2.0078"	484T-0510M	484C-0510M	484A-0510M	484i-0510M
2-1/32"	51.19	2.0313"	484T-20313	484C-20313	484A-20313	484i-20313
2-3/64"	52.00	2.0472"	484T-20472	484C-20472	484A-20472	484i-20472
2-1/16"	52.39	2.0625"	484T-20625	484C-20625	484A-20625	484i-20625
	53.00	2.0866"	484T-0530M	484C-0530M	484A-0530M	484i-0530M
2-3/32"	53.18	2.0938"	484T-20938	484C-20938	484A-20938	484i-20938
2-1/8"	53.98	2.1250"	484T-21250	484C-21250	484A-21250	484i-21250
	54.00	2.1260"	484T-0540M	484C-0540M	484A-0540M	484i-0540M
2-5/32"	54.79	2.1563"	484T-21563	484C-21563	484A-21563	484i-21563
	55.00	2.1654"	484T-0550M	484C-0550M	484A-0550M	484i-0550M
2-3/16"	55.56	2.1875"	484T-21875	484C-21875	484A-21875	484i-21875
	56.00	2.2047"	484T-0560M	484C-0560M	484A-0560M	484i-0560M
2-7/32"	56.36	2.2188"	484T-22188	484C-22188	484A-22188	484i-22188
	57.00	2.2441"	484T-0570M	484C-0570M	484A-0570M	484i-0570M
2-1/4"	57.15	2.2500"	484T-22500	484C-22500	484A-22500	484i-22500
2-9/32"	57.94	2.2813"	484T-22813	484C-22813	484A-22813	484i-22813
	58.00	2.2835"	484T-0580M	484C-0580M	484A-0580M	484i-0580M
2-5/16"	58.74	2.3125"	484T-23125	484C-23125	484A-23125	484i-23125
	59.00	2.3228"	484T-0590M	484C-0590M	484A-0590M	484i-0590M
2-11/32"	59.53	2.3438"	484T-23438	484C-23438	484A-23438	484i-23438
	60.00	2.3662"	484T-0600M	484C-0600M	484A-0600M	484i-0600M
2-3/8"	60.33	2.3750"	484T-23750	484C-23750	484A-23750	484i-23750
	61.00	2.4016"	484T-0610M	484C-0610M	484A-0610M	484i-0610M
2-13/32"	61.12	2.1063"	484T-24063	484C-24063	484A-24063	484i-24063
2-7/16"	61.91	2.4375"	484T-24375	484C-24375	484A-24375	484i-24375
	62.00	2.4409"	484T-0620M	484C-0620M	484A-0620M	484i-0620M
2-15/32"	62.71	2.4688"	484T-24688	484C-24688	484A-24688	484i-24688
	63.00	2.4803"	484T-0630M	484C-0630M	484A-0630M	484i-0630M
2-1/2"	63.50	2.5000"	484T-0635M	484C-0635M	484A-0635M	484i-0635M
	64.00	2.5197"	484T-0640M	484C-0640M	484A-0640M	484i-0640M
2-17/32"	64.29	2.5313"	484T-25313	484C-25313	484A-25313	484i-25313
	65.00	2.5591"	484T-0650M	484C-0650M	484A-0650M	484i-0650M
2-9/16"	65.09	2.5625"	484T-25625	484C-25625	484A-25625	484i-25625

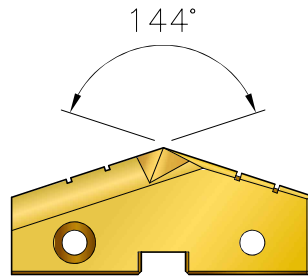
HSS B7 드릴 인서트 5 시리즈 HSS B7 Drill Insert 5 Series




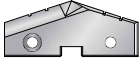


63.5mm(2.2500")~76.2mm(30000")

Diameter						
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
2-1/2"	63.50	2.2500"	045T-0635M	045C-0635M	045A-0635M	045i-0635M
	64.00	2.5197"	045T-0640M	045C-0640M	045A-0640M	045i-0640M
2-17/32"	64.29	2.5313"	045T-25313	045C-25313	045A-25313	045i-25313
2-9/16"	65.09	2.5625"	045T-25625	045C-25625	045A-25625	045i-25625
2-19/32"	65.88	2.5938"	045T-25938	045C-25938	045A-25938	045i-25938
	66.00	2.5984"	045T-0660M	045C-0660M	045A-0660M	045i-0660M
2-5/8"	66.68	2.6250"	045T-26250	045C-26250	045A-26250	045i-26250
2-21/32"	67.47	2.6563"	045T-26563	045C-26563	045A-26563	045i-26563
	68.00	2.6772"	045T-0680M	045C-0680M	045A-0680M	045i-0680M
2-11/16"	68.26	2.6875"	045T-26875	045C-26875	045A-26875	045i-26875
2-23/32"	69.05	2.7188"	045T-27188	045C-27188	045A-27188	045i-27188
2-3/4"	69.85	2.7500"	045T-27500	045C-27500	045A-27500	045i-27500
	70.00	2.7559"	045T-0700M	045C-0700M	045A-0700M	045i-0700M
2-25/32"	70.64	2.7813"	045T-27813	045C-27813	045A-27813	045i-27813
2-13/16"	71.44	2.8125"	045T-28125	045C-28125	045A-28125	045i-28125
	72.00	2.8346"	045T-0720M	045C-0720M	045A-0720M	045i-0720M
2-27/32"	72.23	2.8438"	045T-28438	045C-28438	045A-28438	045i-28438
2-7/8"	73.03	2.8750"	045T-28750	045C-28750	045A-28750	045i-28750
2-29/32"	73.82	2.9063"	045T-29063	045C-29063	045A-29063	045i-29063
	74.00	2.9134"	045T-0740M	045C-0740M	045A-0740M	045i-0740M
2-15/16"	74.61	2.9375"	045T-29375	045C-29375	045A-29375	045i-29375
2-31/32"	75.41	2.9688"	045T-29688	045C-29688	045A-29688	045i-29688
	76.00	2.9921"	045T-0760M	045C-0760M	045A-0760M	045i-0760M
3"	76.20	3.0000"	045T-30000	045C-30000	045A-30000	045i-30000

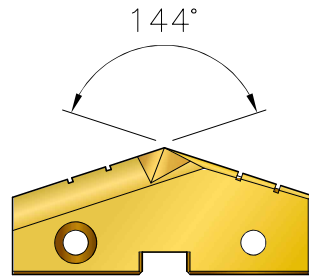
HSS B7 드릴 인서트 6 시리즈 HSS B7 Drill Insert 6 Series







76.99mm(3.0313")~88.90mm(3.5000")

Diameter						
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
3-1/32"	76.99	3.0313"	046T-30313	046C-30313	046A-30313	046i-30313
3-1/16"	77.79	3.0625"	046T-30625	046C-30625	046A-30625	046i-30625
	78.00	3.0709"	046T-0780M	046C-0780M	046A-0780M	046i-0780M
3-3/32"	78.58	3.0938"	046T-30938	046C-30938	046A-30938	046i-30938
3-1/8"	79.38	3.1250"	046T-31250	046C-31250	046A-31250	046i-31250
	80.00	3.1496"	046T-0800M	046C-0800M	046A-0800M	046i-0800M
3-5/32"	80.17	3.1563"	046T-31563	046C-31563	046A-31563	046i-31563
3-3/16"	80.96	3.1875"	046T-31875	046C-31875	046A-31875	046i-31875
3-7/32"	81.76	3.2188"	046T-32188	046C-32188	046A-32188	046i-32188
	82.00	3.2283"	046T-0820M	046C-0820M	046A-0820M	046i-0820M
3-1/4"	82.55	3.2500"	046T-32500	046C-32500	046A-32500	046i-32500
3-9/32"	83.34	3.2813"	046T-32813	046C-32813	046A-32813	046i-32813
	84.00	3.3071"	046T-0840M	046C-0840M	046A-0840M	046i-0840M
3-5/16"	84.14	3.3125"	046T-33125	046C-33125	046A-33125	046i-33125
3-11/32"	84.93	3.3438"	046T-33438	046C-33438	046A-33438	046i-33438
3-3/8"	85.73	3.3750"	046T-33750	046C-33750	046A-33750	046i-33750
	86.00	3.3858"	046T-0860M	046C-0860M	046A-0860M	046i-0860M
3-13/32"	86.52	3.4063"	046T-34063	046C-34063	046A-34063	046i-34063
3-7/16"	87.31	3.4375"	046T-34375	046C-34375	046A-34375	046i-34375
	88.00	3.4646"	046T-0880M	046C-0880M	046A-0880M	046i-0880M
3-15/32"	88.11	3.4688"	046T-34688	046C-34688	046A-34688	046i-34688
3-1/2"	88.90	3.5000"	046T-35000	046C-35000	046A-35000	046i-35000

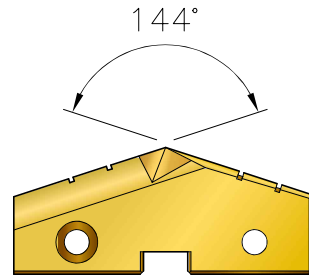
HSS B7 드릴 인서트 7 시리즈 HSS B7 Drill Insert 7 Series




89.69mm(3.5313")~101.60mm(4.0000")

Diameter						
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
3-17/32"	89.69	3.5313"	047T-35313	047C-35313	047A-35313	047i-35313
	90.00	3.5433"	047T-0900M	047C-0900M	047A-0900M	047i-0900M
3-9/16"	90.49	3.5625"	047T-35625	047C-35625	047A-35625	047i-35625
3-19/32"	91.28	3.5938"	047T-35938	047C-35938	047A-35938	047i-35938
	92.00	3.6221"	047T-0920M	047C-0920M	047A-0920M	047i-0920M
3-5/8"	92.08	3.6250"	047T-36250	047C-36250	047A-36250	047i-36250
3-21/32"	92.87	3.6563"	047T-36563	047C-36563	047A-36563	047i-36563
3-11/16"	93.66	3.6875"	047T-36875	047C-36875	047A-36875	047i-36875
	94.00	3.7008"	047T-0940M	047C-0940M	047A-0940M	047i-0940M
3-23/32"	94.46	3.7188"	047T-37188	047C-37188	047A-37188	047i-37188
3-3/4"	95.25	3.7500"	047T-37500	047C-37500	047A-37500	047i-37500
	96.00	3.7795"	047T-0960M	047C-0960M	047A-0960M	047i-0960M
3-25/32"	96.04	3.7813"	047T-37813	047C-37813	047A-37813	047i-37813
3-13/16"	96.84	3.8125"	047T-38125	047C-38125	047A-38125	047i-38125
3-27/32"	97.63	3.8438"	047T-38438	047C-38438	047A-38438	047i-38438
	98.00	3.8583"	047T-0980M	047C-0980M	047A-0980M	047i-0980M
3-7/8"	98.43	3.8750"	047T-38750	047C-38750	047A-38750	047i-38750
3-29/32"	99.22	3.9063"	047T-39063	047C-39063	047A-39063	047i-39063
	100.00	3.9370"	047T-1000M	047C-1000M	047A-1000M	047i-1000M
3-15/16"	100.01	3.9375"	047T-39375	047C-39375	047A-39375	047i-39375
3-31/32"	100.81	3.9688"	047T-39688	047C-39688	047A-39688	047i-39688
4"	101.60	4.0000"	047T-40000	047C-40000	047A-40000	047i-40000

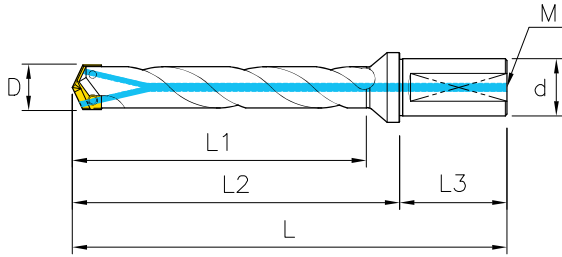
HSS B7 드릴 인서트 8 시리즈 HSS B7 Drill Insert 8 Series



102mm(4.0157")~114.30mm(4.5000")

Diameter			 Tin	 TiCN	 TiAlN	 Alpha
Inch (inch)	Metric (mm)	Decimal (inch)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)	Premium HSS(M48)
4-1/64"	102.00	4.0157"	048T-40157	048C-40157	048A-40157	048i-40157
4-1/16"	103.19	4.0625"	048T-40625	048C-40625	048A-40625	048i-40625
4-3/32"	103.98	4.0938"	048T-40938	048C-40938	048A-40938	048i-40938
4-1/8"	104.00	4.0945"	048T-1040M	048C-1040M	048A-1040M	048i-1040M
	104.78	4.1250"	048T-41250	048C-41250	048A-41250	048i-41250
4-3/16"	106.00	4.1732"	048T-1060M	048C-1060M	048A-1060M	048i-1060M
	106.36	4.1875"	048T-41875	048C-41875	048A-41875	048i-41875
4-1/4"	107.95	4.2500"	048T-42500	048C-42500	048A-42500	048i-42500
	108.00	4.2520"	048T-1082M	048C-1082M	048A-1082M	048i-1082M
4-5/16"	109.54	4.3125"	048T-43125	048C-43125	048A-43125	048i-43125
	110.00	4.3307"	048T-1100M	048C-1100M	048A-1100M	048i-1100M
4-3/8"	111.13	4.3750"	048T-43750	048C-43750	048A-43750	048i-43750
	112.00	4.4094"	048T-1120M	048C-1120M	048A-1120M	048i-1120M
4-7/16"	112.71	4.4375"	048T-44375	048C-44375	048A-44375	048i-44375
	114.00	4.4482"	048T-1140M	048C-1140M	048A-1140M	048i-1140M
4-1/2"	114.30	4.5000"	048T-45000	048C-45000	048A-45000	048i-45000

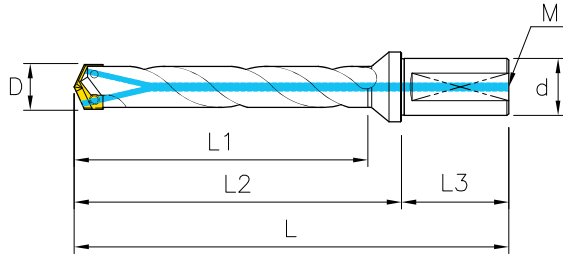
B7S 드릴 Flange Shank / Spiral Flute Type



- Stub(Extra Short) 1.5~2D
- Short 3~4D
- Intermediate 5~6D
- Standard 7~8D
- Extended 8~12D
- Long 11~14D
- XL(Extra long) 20~25D
- 3XL(Extra long) 25~30D

Order No. 주문형번	Length	Dimension (mm)					Shank			Screw	Key						
		Series	D	L	L1	L2	d	L3	M								
B7S-095110134	Standard	Y	9.5~11.0	134	60.3	92.1	20	50	1/8"	BS7-20040	TXL-7						
B7S-095110185	Extended			192.9	111.1	142.9	20	50	1/8"								
B7S-115125134	Standard	Z	11.5~12.5	136	60.3	92.1	20	50	1/8"	BS7-20050							
B7S-115125185	Extended			192.9	111.1	142.9	20	50	1/8"								
B7S-130175137	Standard	0	13.0~17.5	144.9	63.5	94.9	20	50	1/8"	BS7-25060	TXL-8						
B7S-130175188	Extended			195.7	114.3	145.7	20	50	1/8"								
B7S-130175251	Long			259.1	177.8	209.1	20	50	1/8"								
B7S-130175377	XL(extra long)			376.7	295	326.7	20	50	1/8"								
B7S-130175469	3XL(extra long)			468.8	387	418.8	20	50	1/8"								
B7S-155175137	Standard		15.5~17.5	144.9	63.5	94.9	20	50	1/8"								
B7S-155175188	Extended			195.7	114.3	145.7	20	50	1/8"								
B7S-155175251	Long			259.1	177.8	209.1	20	50	1/8"								
B7S-155175377	XL(extra long)			376.7	295	326.7	20	50	1/8"								
B7S-155175469	3XL(extra long)			468.8	387	418.8	20	50	1/8"								
B7S-180240212	Intermediate	1	18.0~24.0	214.4	117.5	158.4	25	56	1/8"	BS7-30070	TXL-9						
B7S-180240262	Standard			265.2	168.3	209.2	25	56	1/8"								
B7S-180240364	Extended			366.8	269.9	310.8	25	56	1/8"								
B7S-180240460	XL(extra long)			460	363	404	25	56	1/8"								
B7S-180240554	XL(extra long)			554.1	457	498.1	25	56	1/8"								
B7S-180240662	3XL(extra long)			662.1	565	606.1	25	56	1/8"								
B7S-220240212	Intermediate			22.0~24.0	214.4	117.5	158.4	25	56				1/8"				
B7S-220240262	Standard				265.2	168.3	209.2	25	56				1/8"				
B7S-220240364	Extended		366.8		269.9	310.8	25	56	1/8"								
B7S-220240460	XL(extra long)		460		363	404	25	56	1/8"								
B7S-220240554	XL(extra long)		554.1		457	498.1	25	56	1/8"								
B7S-220240662	3XL(extra long)		662.1		565	606.1	25	56	1/8"								
B7S-250350241	Intermediate		2		25.0~35.0	243	136.5	183	32				60	1/4"	BS7-40095	TXL-15	
B7S-250350292	Standard					293.8	187.3	233.8	32				60	1/4"			
B7S-250350393	Extended			395.4		288.9	335.4	32	60				1/4"				
B7S-250350505	Long			505		399	445	32	60				1/4"				
B7S-250350618	XL(extra long)	617.7		511		557.7	32	60	1/4"								
B7S-250350799	3XL(extra long)	798.7		692		738.7	32	60	1/4"								
B7S-300350241	Intermediate	30.0~35.0		243	136.5	183	32	60	1/4"								
B7S-300350292	Standard			293.8	187.3	233.8	32	60	1/4"								
B7S-300350393	Extended			395.4	288.9	335.4	32	60	1/4"								
B7S-300350618	XL(extra long)			617.7	511	557.7	32	60	1/4"								
B7S-300350799	3XL(extra long)			798.7	692	738.7	32	60	1/4"								

B7S 드릴 Flange Shank / Spiral Flute Type



- Stub(Extra Short) 1.5~2D
- Short 3~4D
- Intermediate 5~6D
- Standard 7~8D
- Extended 8~12D
- Long 11~14D
- XL(Extra long) 20~25D
- 3XL(Extra long) 25~30D

Order No. 주문형번	Length	Dimension (mm)					Shank			Screw	Flute	
		Series	D	L	L1	L2	d	L3	M			
B7S-360470292A	Intermediate	3	36.0~47.0	292.3	165.1	222.3	40	70	1/4"	BS7-50150	TXL-20	
B7S-360470292B	Intermediate			292.3	165.1	222.3	42	70	1/4"			
B7S-360470337A	Standard			336.7	209.6	266.7	40	70	1/4"			
B7S-360470337B	Standard			336.7	209.6	266.7	42	70	1/4"			
B7S-360470476A	Extended			476.4	349	406.4	40	70	1/4"			
B7S-360470580A	Long			580	452	510	40	70	1/4"			
B7S-360470686A	XL(extra long)	4	48.0~65.0	685.9	558.8	615.9	40	70	1/4"	BS7-50150	TXL-20	
B7S-480650356A	Standard			355.8	231.8	285.8	40	70	1/4"			
B7S-480650356B	Standard			355.8	231.8	285.8	42	70	1/4"			
B7S-480650546A	Extended			546.3	422	476.3	40	70	1/4"			
B7S-480650750A	XL(extra long)	749.5	625	679.5	40	70	1/4"	BS7-60190	TXL-25			
B7S-640880302	Short	5,6	64.0~88.0	302.3	171.9	222.3	50				80	1/2"
B7S-640880404	Standard			403.9	273.5	323.9	50				80	1/2"
B7S-640880594	Extended			594.4	464	514.4	50				80	1/2"
B7S-9001140312	Short	7,8	90.0~114.0	311.8	172	231.8	50				80	1/2"
B7S-9001140413	Standard			413.4	273	333.4	50				80	1/2"
B7S-9001140696	Extended			696	556	616	50	80	1/2"			

B7K 드릴 Flange Shank / Straight Flute Type

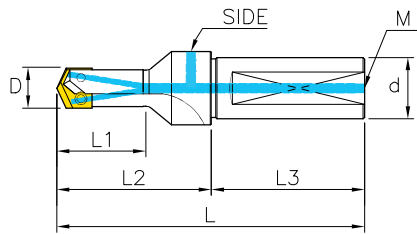


FIG1

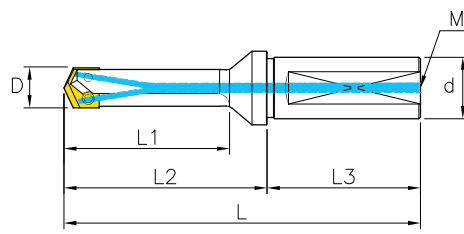
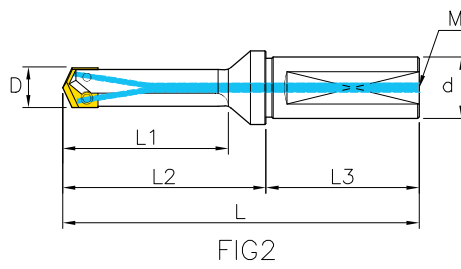
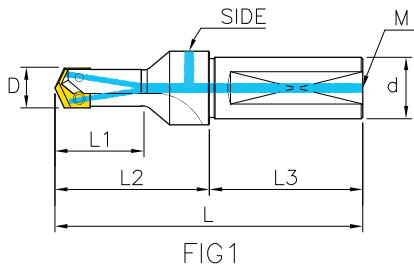


FIG2

- Stub(Extra Short) 1.5~2D
- Short 3~4D
- Intermediate 5~6D
- Standard 7~8D
- Extended 8~12D
- Long 11~14D
- XL(Extra long) 20~25D
- 3XL(Extra long) 25~30D

Order No. 주문형번	Length	Dimension (mm)					Shank					Screw	Key
		Series	D	L	L1	L2	d	L3	M	Fig.	SIDE		
B7K-095110092	Stub(extra short)	Y	9.5~11.0	98	19.9	50	16	48	1/16"	1	1/8"	BS7-20040	TXL-7
B7K-095110105	Short			113.5	31.8	63.5	20	50	1/8"	2	-		
B7K-095110296	XL(extra long)	Z	11.5~12.5	304.1	222	254.1	20	50	1/8"	2	-	BS7-20050	TXL-7
B7K-095110364	3XL(extra long)			372.3	290	322.3	20	50	1/8"	2	-		
B7K-115125092	Stub(extra short)	Z	11.5~12.5	98	19.9	50	16	48	1/16"	1	1/8"	BS7-20050	TXL-7
B7K-115125105	Short			113.5	31.8	63.5	20	50	1/8"	2	-		
B7K-115125296	XL(extra long)	0	13.0~17.5	304.1	222	254.1	20	50	1/8"	2	-	BS7-25060	TXL-8
B7K-115125364	3XL(extra long)			372.3	290	322.3	20	50	1/8"	2	-		
B7K-130175092	Stub(extra short)	0	13.0~17.5	100.4	22.2	50.4	20	50	1/8"	1	1/8"	BS7-25060	TXL-8
B7K-130175108	Short			116.3	34.9	66.3	20	50	1/8"	2	-		
B7K-130175145	Intermediate	0	13.0~17.5	145	63.5	95	20	50	1/8"	2	-	BS7-25060	TXL-8
B7K-130175196	Extended			196	114	146	20	50	1/8"	2	-		
B7K-130175369	XL(extra long)	0	13.0~17.5	376.7	295	326.7	20	50	1/8"	2	-	BS7-25060	TXL-8
B7K-130175461	3XL(extra long)			468.8	387	418.8	20	50	1/8"	2	-		
B7K-155175092	Stub(extra short)	0	15.5~17.5	100.4	22.2	50.4	20	56	1/8"	1	1/8"	BS7-25060	TXL-8
B7K-155175108	Short			116.3	34.9	66.3	20	56	1/8"	2	-		
B7K-155175145	Intermediate	0	15.5~17.5	145	63.5	95	20	56	1/8"	2	-	BS7-25060	TXL-8
B7K-155175196	Extended			196	114	146	20	56	1/8"	2	-		
B7K-155175369	XL(extra long)	0	15.5~17.5	376.7	295	326.7	20	56	1/8"	2	-	BS7-25060	TXL-8
B7K-155175461	3XL(extra long)			468.8	387	418.8	20	56	1/8"	2	-		
B7K-180240133	Stub(extra short)	1	18.0~24.0	135.4	47.6	79.4	25	56	1/8"	1	1/8"	BS7-30070	TXL-9
B7K-180240164	Short			166.7	66.7	110.7	25	56	1/8"	2	-		
B7K-180240265	Extended	1	18.0~24.0	265	168	209	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-180240367	Long			367	270	311	25	56	1/8"	2	-		
B7K-180240460	XL(extra long)	1	18.0~24.0	460	363	404	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-180240551	XL(extra long)			554.1	457	498.1	25	56	1/8"	2	-		
B7K-180240659	3XL(extra long)	1	18.0~24.0	662.1	569	606.1	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-220240133	Stub(extra short)			135.4	47.6	79.4	25	56	1/8"	1	1/8"		
B7K-220240164	Short	1	22.0~24.0	166.7	66.7	110.7	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-220240265	Extended			265	168	209	25	56	1/8"	2	-		
B7K-220240367	Long	1	22.0~24.0	367	270	311	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-220240460	XL(extra long)			460	363	404	25	56	1/8"	2	-		
B7K-220240551	XL(extra long)	1	22.0~24.0	554.1	457	498.7	25	56	1/8"	2	-	BS7-30070	TXL-9
B7K-220240659	3XL(extra long)			662.1	569	606.1	25	56	1/8"	2	-		
B7K-250350150	Stub(extra short)	2	25.0~35.0	152.1	57.2	92.1	32	60	1/8"	1	1/8"	BS7-40095	TXL-15
B7K-250350190	Short			192.2	85.7	132.2	32	60	1/4"	2	-		
B7K-250350294	Standard	2	25.0~35.0	294	188	234	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-250350395	Extended			395	289	335	32	60	1/4"	2	-		
B7K-250350505	Long	2	25.0~35.0	505	399	445	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-250350616	XL(extra long)			617.7	511	557.7	32	60	1/4"	2	-		
B7K-250350797	3XL(extra long)	2	25.0~35.0	798.7	692	738.7	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-300350150	Stub(extra short)			152.1	57.2	92.1	32	60	1/4"	1	1/8"		
B7K-300350190	Short	2	30.0~35.0	192.2	85.7	132.2	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-300350294	Standard			294	188	234	32	60	1/4"	2	-		
B7K-300350395	Extended	2	30.0~35.0	395	289	335	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-300350505	Long			505	399	445	32	60	1/4"	2	-		
B7K-300350616	XL(extra long)	2	30.0~35.0	617.7	511	557.7	32	60	1/4"	2	-	BS7-40095	TXL-15
B7K-300350797	3XL(extra long)			798.7	692	738.7	32	60	1/4"	2	-		
B7K-360470248A	Short	3	36.0~47.0	247.8	120.7	177.8	40	70	1/4"	2	-	BS7-50150	TXL-20
B7K-360470248B	Short			247.8	120.7	177.8	42	70	1/4"	2	-		
B7K-360470337A	Intermediate	3	36.0~47.0	337	210	267	40	70	1/4"	2	-	BS7-50150	TXL-20

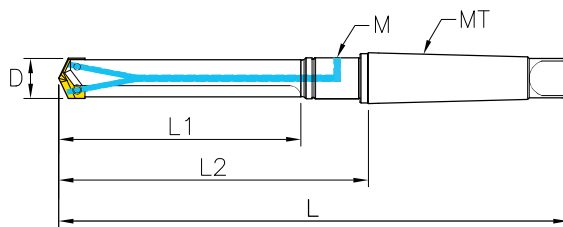
B7K 드릴 Flange Shank / Straight Flute Type



- Stub(Extra Short) 1.5~2D
- Short 3~4D
- Intermediate 5~6D
- Standard 7~8D
- Extended 8~12D
- Long 11~14D
- XL(Extra long) 20~25D
- 3XL(Extra long) 25~30D

Order No. 주문형번	Length	Dimension (mm)						Shank				Screw	Key		
		Series	D	L	L1	L2	d	L3	M	Fig.	SIDE				
B7K-360470476A	Extended	3	36.0~47.0	476.4	349.3	406.4	40	70	1/4"	2	-	BS7-50150	TXL-20		
B7K-360470476B	Extended			476.4	349.3	406.4	42	70	1/4"	2	-				
B7K-360470580A	Long			580	491	510	40	70	1/4"	2	-				
B7K-360470686A	XL(extra long)	4	48.0~65.0	685.9	558.8	616	40	70	1/4"	2	-				
B7K-480650254A	Short			254.2	130.2	184.2	40	70	1/4"	2	-				
B7K-480650254B	Short			254.2	130.2	184.2	42	70	1/4"	2	-				
B7K-480650356A	Intermediate			356	232	286	40	70	1/4"	2	-				
B7K-480650546A	Extended			546.3	422.3	476.3	40	70	1/4"	2	-				
B7K-480650546B	Extended			546.3	422.3	476.3	42	70	1/4"	2	-				
B7K-480650750A	XL(extra long)	749.5	625	679.6	40	70	1/4"	2	-						
B7K-640880318	Short	5,6	64.0~88.0	317.5	171.5	237.5	50	80	1/4"	2	-			BS7-60190	TXL-25
B7K-640880419	Standard			419.1	273	339	50	80	1/4"	2	-				
B7K-640880610	Extended			609.6	463.6	529.6	50	80	1/4"	2	-				
B7K-9001140352	Short	7,8	90.0~114.0	352.4	171.5	272.4	50	80	1/4"	2	-				
B7K-9001140454	Standard			454	273	374	50	80	1/4"	2	-				
B7K-9001140737	Extended			736.6	555.6	656.6	50	80	1/4"	2	-				

B7H 드릴 Taper Shank / Straight Flute Type

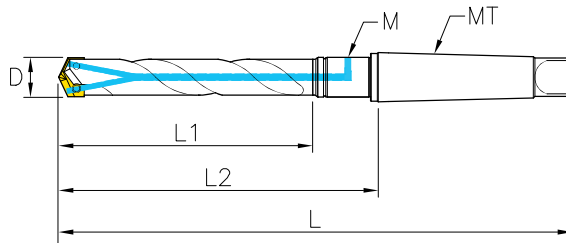


- Stub(Extra Short) 1.5~2D
- Short 3~4D
- Intermediate 5~6D
- Standard 7~8D
- Extended 8~12D
- Long 11~14D
- XL(Extra long) 20~25D
- 3XL(Extra long) 25~30D

Order No. 주문형번	Length	Dimension (mm)							Screw	Key	
		Series	D	L	L1	L2	MT	M			
B7H-095110163	Short	Y	9.5~11.0	162.9	31.8	88.0	#2	1/16"	COS-190522	BS7-20040	TXL-7
B7H-115125163	Short	Z	11.5~12.5	162.9	31.8	88.0	#2	1/16"			
B7H-130175167	Short	0	13.0~17.5	167.1	35.0	92.4	#2	1/16"			
B7H-155175167	Short		15.5~17.5	167.1	35.0	92.4	#2	1/16"			
B7H-180240236	Short	1	18.0~24.0	236.1	69.8	142.5	#3	1/8"	COS-254028	BS7-30070	TXL-9
B7H-220240236	Short		22.0~24.0	236.1	69.8	142.5	#3	1/8"			
B7H-250350277	Short	2	25.0~35.0	277.4	85.7	160.4	#4	1/8"	COS-444535	BS7-40095	TXL-15
B7H-300350285	Short		30.0~35.0	284.6	85.7	167.6	#4	1/4"			
B7H-360470323	Short	3	36.0~47.0	322.7	119.5	205.2	#4	1/4"	COS-317535	BS7-501500	TXL-20
B7H-360470553	Extended			552.5	349.3	435.0	#4	1/4"			
B7H-360470676	Long			676	472.8	551.5	#4	1/4"			
B7H-480650368	Short	4	48.0~65.0	368.3	130.1	219.1	#5	1/4"	COS-444535	BS7-60190	TXL-25
B7H-480650660	Extended			660.4	422.3	511.2	#5	1/4"			
B7H-640880435	Short	5,6	64.0~88.0	435.0	171.5	287.3	#5	1/2"	COS-571544	BS7-60190	TXL-25
B7H-640880727	Extended			727.1	463.6	579.4	#5	1/2"			
B7H-9001140445	Short	7,8	90.0~114.0	444.5	171.5	296.8	#5	1/2"	COS-571544	BS7-60190	TXL-25
B7H-9001140829	Extended			828.7	555.6	681.1	#5	1/2"			

B7K 드릴 (Flange Shank / Straight Flute Type) / B7H 드릴 (Taper Shank / Straight Flute Type)

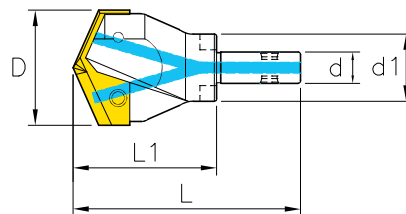
B7M 드릴 Taper Shank / Sprial Flute Type



Stub(Extra Short)	1.5~2D
Short	3~4D
Intermediate	5~6D
Standard	7~8D
Extended	8~12D
Long	11~14D
XL(Extra long)	20~25D
3XL(Extra long)	25~30D

Order No. 주문형번	Length	Dimension (mm)							Image	Image	Image	Image	
		Series	D	L	L1	L2	MT	M					
B7M-095110191	Standard	Y	9.5~11.0	191.3	60.3	116.7	#2	1/16"	COS-190522	BS7-20040	TXL-7		
B7M-095110242	Extended			242.1	111.1	167.4	#2	1/16"					
B7M-115125191	Standard	Z	11.5~12.5	191.3	60.3	116.7	#2	1/16"		BS7-20050	TXL-7		
B7M-115125242	Extended			242.1	111.1	167.4	#2	1/16"					
B7M-130175196	Standard	0	13.0~17.5	195.7	63.5	121.0	#2	1/16"		BS7-25060	TXL-8		
B7M-130175247	Extended			246.5	114.3	171.8	#2	1/16"					
B7M-130175310	Long			310.3	177.8	235.3	#2	1/16"					
B7M-155175196	Standard		15.5~17.5	195.7	63.5	121.0	#2	1/16"					
B7M-155175247	Extended			246.5	114.3	171.8	#2	1/16"					
B7M-155175310	Long			310.3	177.8	235.3	#2	1/16"					
B7M-180240287	Intermediate	1	18.0~24.0	286.9	120.7	193.3	#3	1/8"		COS-254028	BS7-30070		TXL-9
B7M-180240338	Standard			337.8	171.5	244.1	#3	1/8"					
B7M-180240439	Extended			439.4	273.1	345.7	#3	1/8"					
B7M-220240287	Intermediate		22.0~24.0	286.9	120.7	193.3	#3	1/8"					
B7M-220240338	Standard			337.8	171.5	244.1	#3	1/8"					
B7M-220240439	Extended			439.4	273.1	345.7	#3	1/8"					
B7M-250350328	Intermediate	2	25.0~35.0	328.2	136.5	211.2	#4	1/8"	COS-317535	BS7-40095	TXL-15		
B7M-250350379	Standard			379.0	187.3	262.0	#4	1/8"					
B7M-250350481	Extended			480.6	289.0	363.6	#4	1/8"					
B7M-300350335	Intermediate		30.0~35.0	335.4	136.5	218.4	#4	1/4"					
B7M-300350386	Standard			386.2	187.3	269.2	#4	1/4"					
B7M-300350488	Extended			487.8	289.0	370.8	#4	1/4"					
B7M-360470368	Intermediate	3	36.0~47.0	368.4	165.1	250.9	#4	1/4"	COS-444535	BS7-50150	TXL-20		
B7M-360470413	Standard			412.8	209.5	295.3	#4	1/4"					
B7M-480650470	Standard	4	48.0~65.0	469.9	231.8	320.7	#5	1/4"	COS-444535				
B7M-640880537	Standard	5,6	64.0~88.0	536.6	273.1	388.9	#5	1/2"	COS-571544	BS7-60190	TXL-25		
B7M-9001140546	Standard	7,8	90.0~114.0	546.1	273.1	398.5	#5	1/2"	COS-571544	BS7-60190	TXL-25		



B7X 드릴 Modular Head



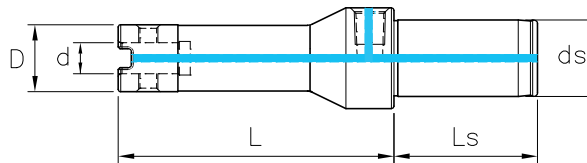
Order No. 주문형번	Dimension (mm)				Shank			Image	Image	Image
	D	L	L1	d1	d	L2				
B7X-48065060	48 - 65	95	60	28	13	35	BS7-50150	TXL-20		
B7X-64077080	64 - 77	120	80	32	16	40				
B7X-76090080	76 - 90	125	80	40	22	45				
B7X-90010190	90 - 101	140	90	48	27	50				
B7X-10011490	100 - 114	140	90	58	32	50				

MUE Modular Extension



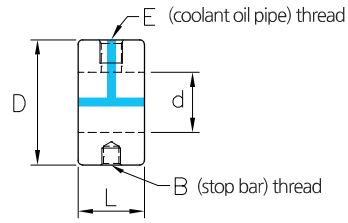
Order No. 주문형번	Dimension (mm)						
	D	d	L	ds			
MUE-2813115	28	13	115	13	JTB-08115	DKR-281310	
MUE-2813150	28	13	150	13			
MUE-2813200	28	13	200	13			
MUE-2813300	28	13	300	13			
MUE-3216115	32	16	115	16	JTB-08115	DKR-321610	
MUE-3216200	32	16	200	16			
MUE-3216300	32	16	300	16			
MUE-4022113	40	22	113	22	JTB-10145	DKR-402212	
MUE-4022200	40	22	200	22			
MUE-4022300	40	22	300	22			
MUE-4827113	48	27	113	27	JTB-12175	DKR-482712	
MUE-4827200	48	27	200	27			
MUE-4827300	48	27	300	27			
MUE-5832186	58	32	186	32	JTB-12195	DKR-583214	
MUE-5832300	58	32	300	32			

MUB Modular Flange Shank



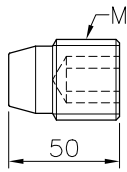
Order No. 주문형번	Dimension (mm)			Shank				
	D	d	L	ds	Ls			
MUB-2813115	28	13	115	32	60	JTB-08115	DKR-281310	
MUB-2813200	28	13	200	32	60			
MUB-2813300	28	13	300	32	60			
MUB-3216125	32	16	125	40	70	JTB-08115	DKR-321610	
MUB-3216200	32	16	200	40	70			
MUB-3216300	32	16	300	40	70			
MUB-4022148	40	22	148	40	70	JTB-10145	DKR-402212	
MUB-4022200	40	22	200	40	70			
MUB-4022300	40	22	300	40	70			
MUB-4827168	48	27	168	40	70	JTB-12175	DKR-482712	
MUB-4827300	48	27	300	40	70			
MUB-5832186	58	32	186	40	70			
MUB-5832300	58	32	300	40	70	JTB-12195	DKR-583214	

Coolant Oil Supplier



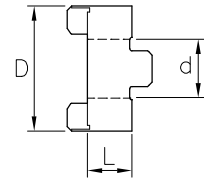
Order No. 주문형번	Dimension (mm)				
	d	D	L	B	E
COS-190522	19.05	44.45	22.23	M8×1.25	1/8"
CSO-254028	25.40	53.97	28.57	M8×1.25	1/8"
COS-317535	31.75	63.50	34.92	M10×1.5	1/4"
COS-444535	44.45	76.20	34.92	M10×1.5	1/4"
COS-571544	57.15	95.27	44.45	M12×1.75	1/2"

Joint Screw



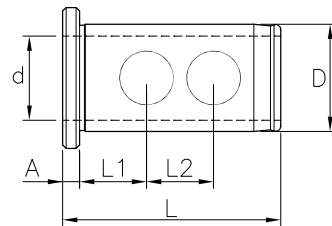
Order No. 주문형번	Dimension (mm)		Wrench	Price
	M	L		
JTB-08115	M8.0	11.5	4	3,000
JTB-10145	M10.0	14.5	5	3,000
JTB-12175	M12.0	17.5	6	3,000
JTB-12195	M12.0	19.5	6	3,000

Drive Key Ring



Order No. 주문형번	Dimension (mm)		
	D	d	L
DKR-281310	28	13	10
DKR-321610	32	16	10
DKR-402212	40	22	12
DKR-482712	48	27	12
DKR-583214	58	32	14

Drill Sleeve



Order No. 주문형번	Dimension (mm)					
	D	d	L	L1	L2	A
BSL-322065	32	20	65	20	-	5
BSL-322565	32	25	65	20	20	5
BSL-402075	40	20	75	20	-	5
BSL-402575	40	25	75	20	25	5
BSL-403275	40	32	75	20	25	5
BSL-502095	50	20	95	35	-	5
BSL-502595	50	25	95	35	-	5
BSL-503295	50	32	95	35	35	5
BSL-504095	50	40	95	35	35	5

HSS B7 인서트 절삭 데이터 HSS B7 Insert Cutting Data

Drill Inserts (Metric) - High Speed Steel

Material 피삭재	Brinell Hardness	HSS Grade	Speed 절삭속도 (m/min)			Feed(mm/rev)							
			TiN	TiCN	TiAlN	ø 9.5 ~ ø 12.5	ø 13 ~ ø 17.5	ø 18 ~ ø 24	ø 25 ~ ø 35	ø 36 ~ ø 47	ø 48 ~ ø 65	ø 66 ~ ø 114	
P강 Steel	연강 Free Machining Steel 1118,1215,12L14,etc	100-150	M4	61	85	79	0.18	0.25	0.33	0.41	0.51	0.58	0.71
		150-200	M4	55	79	72	0.18	0.25	0.33	0.41	0.51	0.59	0.71
		200-250	M4	49	73	64	0.15	0.25	0.33	0.41	0.51	0.58	0.71
	저탄소강 Low Carbon Steel 1010,1020,1025, 1522,1144,etc	85-125	M4	52	76	67	0.15	0.23	0.30	0.38	0.48	0.58	0.69
		125-175	M4	49	73	64	0.15	0.23	0.30	0.38	0.48	0.58	0.69
		175-225	M4	46	69	59	0.13	0.20	0.25	0.36	0.46	0.53	0.61
		225-275	M4	43	64	55	0.13	0.20	0.25	0.36	0.46	0.53	0.61
	중탄소강 Medium Carbon Steel 1030,1040,1050,1527 1140,1151,ect	125-175	M4	49	73	64	0.15	0.23	0.30	0.38	0.48	0.58	0.69
		175-225	M4	46	69	59	0.13	0.20	0.25	0.36	0.46	0.53	0.61
		225-275	M4	43	64	55	0.13	0.20	0.25	0.36	0.46	0.53	0.61
	구조용강 Structural Steel A36,A285,A516,ect	125-175	M4	49	73	64	0.15	0.23	0.30	0.38	0.48	0.58	0.69
		175-225	M4	46	69	59	0.13	0.20	0.25	0.36	0.46	0.53	0.61
		225-275	M4	43	64	55	0.13	0.20	0.25	0.36	0.46	0.53	0.61
	주철/덕틸 Cast Iron/S.G Iron A48-76,GR30/GR45, A536-72,A22-76	275-325	T15,M48	40	59	52	0.10	0.18	0.23	0.30	0.41	0.48	0.56
		100-150	M4	43	61	55	0.15	0.25	0.30	0.36	0.41	0.53	0.66
		150-250	M4	37	52	47	0.13	0.23	0.25	0.30	0.41	0.48	0.61
		250-350	T15,M48	30	43	40	0.10	0.20	0.23	0.25	0.36	0.43	0.51
		120-150	M4	52	76	67	0.18	0.30	0.41	0.51	0.61	0.69	0.76
150-200		M4	46	69	59	0.15	0.28	0.36	0.46	0.56	0.64	0.71	
합금강 Alloy Steel 4140,5140,8640,etc	200-220	M4	40	59	52	0.15	0.23	0.30	0.41	0.46	0.53	0.61	
	220-260	T15,M48	34	50	44	0.13	0.18	0.23	0.30	0.36	0.43	0.51	
	260-320	T15,M48	27	41	37	0.10	0.15	0.18	0.23	0.30	0.36	0.41	
	125-175	M4	46	64	59	0.15	0.20	0.25	0.36	0.43	0.48	0.56	
	175-225	M4	43	59	55	0.13	0.20	0.25	0.36	0.43	0.48	0.56	
	225-275	M4	40	55	52	0.13	0.18	0.25	0.36	0.43	0.48	0.56	
공구강 Tool Steel H13,H21,A4,O-2,S-3,etc	275-325	T15,M48	37	52	47	0.10	0.15	0.23	0.30	0.38	0.43	0.51	
	325-375	T15,M48	34	47	44	0.08	0.15	0.23	0.30	0.38	0.43	0.51	
	150-200	T15	24	34	32	0.10	0.15	0.20	0.25	0.30	0.38	0.43	
M 스테인리스강 Stainless steel	스테인리스강 Stainleed Steel 400 Series 416,420,etc	185-275	T15,M48	23	32	29	0.08	0.18	0.20	0.25	0.36	0.41	0.46
		275-350	T15,M48	18	27	24	0.08	0.15	0.18	0.20	0.30	0.30	0.41
	스테인리스강 Stainleed Steel 300 Series 304,316,17-4PH,etc	185-275	T15,M48	18	27	24	0.08	0.15	0.18	0.20	0.30	0.30	0.46
N 비철금속 Nonferrous metals	알루미늄 Aluminium 2014,6061,7075, etc	30	M4	183	259	229	0.20	0.33	0.41	0.51	0.56	0.64	0.64
		180	M4	91	137	122	0.20	0.33	0.41	0.51	0.56	0.67	0.64
S 내열합금 Super-alloys and titanium	내열합금 High Temp Alloy Hastelloy B,Inconel 600, etc	220-310	M48	8	11	3	0.08	0.15	0.18	0.20	0.25	0.30	-
		225-300	T15,M48	24	34	30	0.13	0.18	0.23	0.25	0.36	0.43	0.51
	고강도 합금강 High Strength Alloy 4340,4330V,300M, etc	300-350	T15,M48	18	26	24	0.10	0.18	0.23	0.25	0.36	0.43	0.51
		350-400	M48	15	21	20	0.08	0.08	0.20	0.23	0.30	0.38	0.46

인서트의 외경이 드릴 몸통부위 보다 최소0.3mm(0.012)이상 커야 함.
Check that the insert outer diameter is a minimum 0.3mm(0.012") larger than the holder body diameter.

HSS Grade=M4=HSS M4, T15=Super HSS T15,
M48=Premium HSS M48

상기표의 추천 Speed와 Feed는 이상적인 조건이며 장비의 상태와 작업
여건에 따라 Speed와 Feed는 줄여서 작업을 하십시오.

"The recommendations for speeds, feeds and other parameters
presented in this chart are nominal recommendations and should
be considered only as good starting points."

초기 작업시 Speed는 약20%, Feed는 약10%줄여서 작업조건을 설정
하시기를 바랍니다.

When initial operation, speed and feed reductions (20% reduction
in speed and 10% reduction in feed)are recommended.

$$M/min = RPM \times 0.003 \times DIA$$

$$mm/min = (RPM) \times (mm/rev)$$

$$RPM = \frac{318.47 \times (M/min)}{DIA}$$

RPM = Revolution per minute (rev/min)

M/mim = Surface meter per minute (M/min)

DIA = Diameter of drill (mm)

mm/rev = Feed rate (mm/rev)

Deep Hole Drill in Speed & Feed Adujstment

Holder	Extended	Long	XL	3XL
Speed	0.90	0.85	0.80	0.75
Feed	-	0.95	0.90	0.90

Recommended Speed and Feed Example :

"If recommended speed and feed is 30M/min and
0.50mm/rev

for a standard length holder, then the speed and feed using
a 3XL holder in the sam application would be 22.5M/min
and 0.45mm/rev"

$$ex) 30 \times 0.75 = 22.5m/min, 0.50 \times 0.90 = 0.45mm/rev$$

Carbide B7 인서트 절삭 데이터 Carbide B7 Insert Cutting Data

Drill Inserts (Metric) - Carbide

Material 피삭재	Brinell Hardness	Speed 절삭속도 (m/min)	Feed(mm/rev)					
		Alpha	φ9.5~φ12.5	φ13~φ17.5	φ18~φ24	φ25~φ35	φ36~φ47	
P강 Steel	연강 Free Machining Steel 1118,1215,12L14,etc	100-150	128	0.20	0.30	0.38	0.45	0.53
	저탄소강 Low Carbon Steel 1010,1020,1025, 1522,1144,etc	150-200	110	0.18	0.28	0.35	0.40	0.48
		200-250	104	0.15	0.25	0.33	0.38	0.43
		85-125	119	0.20	0.25	0.33	0.43	0.48
	중탄소강 Medium Carbon Steel 1030,1040,1050,1527 1140,1151,ect	125-175	104	0.18	0.25	0.33	0.43	0.48
		175-225	95	0.15	0.23	0.30	0.38	0.43
		225-275	83	0.13	0.23	0.30	0.38	0.43
	구조용강 Structural Steel A36,A285,A516,ect	125-175	104	0.18	0.25	0.33	0.43	0.45
		175-225	95	0.15	0.23	0.33	0.38	0.43
		225-275	83	0.15	0.23	0.30	0.38	0.43
	주철/덕티일 Cast Iron/S.G Iron A48-76,GR30/GR45, A536-72,A22-76	275-325	70	0.13	0.23	0.30	0.35	0.40
		100-150	95	0.20	0.28	0.35	0.40	0.45
		150-250	76	0.15	0.25	0.30	0.35	0.40
	합금강 Alloy Steel 4140,5140,8640,etc	250-350	70	0.13	0.23	0.28	0.25	0.35
		120-150	141	0.20	0.30	0.38	0.48	0.58
150-200		122	0.18	0.28	0.33	0.43	0.53	
공구강 Tool Steel H13,H21,A4,O-2,S3,etc	200-220	110	0.15	0.23	0.30	0.38	0.45	
	220-260	95	0.13	0.20	0.28	0.33	0.38	
	260-320	83	0.13	0.18	0.25	0.28	0.33	
M 스테인레스강 Stainless steel	125-175	99	0.18	0.25	0.33	0.40	0.45	
	175-225	92	0.15	0.23	0.30	0.38	0.43	
	225-275	83	0.15	0.23	0.30	0.38	0.43	
N 비철금속 Nonferrous metals	275-325	76	0.13	0.20	0.28	0.35	0.40	
	325-375	67	0.10	0.18	0.25	0.33	0.38	
	150-200	67	0.10	0.18	0.23	0.28	0.33	
S 내열합금 Super-alloys and titanium	200-250	52	0.10	0.15	0.23	0.28	0.33	
	185-275	64	0.08	0.08	0.08	0.08	0.08	
	275-350	49	0.08	0.08	0.08	0.08	0.08	
내열합금 High Temp Alloy Hastelloy B,Inconel 600, etc	135-185	64	0.08	0.08	0.08	0.08	0.08	
	185-275	49	0.08	0.08	0.08	0.08	0.08	
	304,316,17-4PH,etc	185-275	49	0.08	0.08	0.08	0.08	
알루미늄 Aluminium 2014,6061,7075, etc	30	460	0.25	0.38	0.45	0.50	0.55	
	180	305	0.23	0.33	0.40	0.45	0.50	
	140-220	32	0.10	0.18	0.23	0.28	0.33	
	220-310	26	0.10	0.15	0.15	0.25	0.30	
고경도 합금강 High Strength Alloy 4340,4330V,300M, etc	225-300	61	0.15	0.23	0.25	0.30	0.38	
	300-350	55	0.13	0.20	0.23	0.28	0.35	
	350-400	49	0.10	0.18	0.20	0.25	0.30	

인서트의 외경이 드릴 몸통부위 보다 최소0.3mm(0.012)이상 커야 함.
Check that the insert outer diameter is a minimum 0.3mm(0.012")
larger than the holder body diameter.

RPM = Revolution per minute (rev/min)
M/mim = Surface meter per minute (M/min)
DIA = Diameter of drill (mm)
mm/rev = Feed rate (mm/rev)

HSS Grade=M4=HSS M4, T15=Super HSS T15,
M48=Premium HSS M48

상기표의 추천 Speed와 Feed는 이상적인 조건이며 장비의 상태와 작업
여건에 따라 Speed와 Feed는 줄여서 작업을 하십시오.

"The recommendations for speeds, feeds and other parameters
presented in this chart are nominal recommendations and should
be considered only as good starting points."

초기 작업시 Speed는 약20%, Feed는 약10%줄여서 작업조건을 설정
하시기를 바랍니다.

When initial operation, speed and feed reductions (20% reduction
in speed and 10% reduction in feed)are recommended.

$$M/min = RPM \times 0.003 \times DIA$$

$$mm/min = (RPM) \times (mm/rev)$$

$$RPM = \frac{318.47 \times (M/min)}{DIA}$$

Deep Hole Drill in Speed & Feed Adujstment

Holder	Extended	Long	XL	3XL
Speed	0.90	0.85	0.80	0.75
Feed	-	0.95	0.90	0.90

Recommended Speed and Feed Example :

"If recommended speed and feed is 30M/min and
0.50mm/rev

for a standard length holder, then the speed and feed using
a 3XL holder in the sam application would be 22.5M/min
and 0.45mm/rev"

$$ex) 30 \times 0.75 = 22.5m/min, 0.50 \times 0.90 = 0.45mm/rev$$



추천 절삭유압

Coolant Recommendation

Drill Inserts (Metric) - Coolant Recommendations

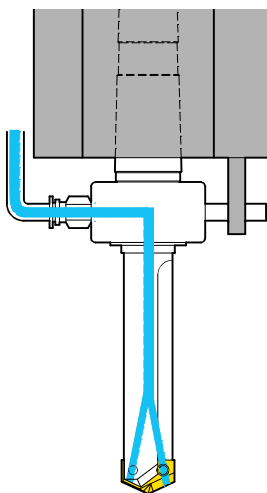
Material 피삭재	BAR (pressure) LPM (flow rate)	HSS							Carbide					
		ø 9.5 ~ ø 12.5	ø 13 ~ ø 17.5	ø 18 ~ ø 24	ø 25 ~ ø 35	ø 36 ~ ø 47	ø 48 ~ ø 65	ø 76 ~ ø 102	ø 9.5 ~ ø 12.5	ø 13 ~ ø 17.5	ø 18 ~ ø 24	ø 25 ~ ø 35	ø 36 ~ ø 47	
P강 Steel	연강 Free Machining Steel 1118, 1215, 12L14, etc	Bar	12~13	7~8	7~10	6~8	5~7	4	5~6	17~20	17	15	15	20
	저탄소강 Low Carbon Steel 1010, 1020, 1025, 1522, 1144, etc	Bar	11~12	5~6	5~7	4~6	4~5	2~3	3~5	18	11	11	12	9
	중탄소강 Medium Carbon Steel 1030, 1040, 1050, 1527, 1140, 1151, etc	Bar	11	5~6	5~6	4~5	3~5	2~3	3~5	17	10	10	10	8
	구조용강 Structural Steel A36, A285, A516, etc	Bar	11	5~6	5~6	3~4	3	2	3	16	9	8	7	5
	합금강 Alloy Steel 4140, 5140, 8640, etc	Bar	11	5	5~6	3~5	3~4	2	3	17	9	10	8	7
	공구강 Tool Steel H13, H21, A-4, O-2, S-3, etc	Bar	10~11	4	3	2	2	2	2	15	5	5	3	3
M 스테인레스강 Stainless steel	스테인레스강 Stainless Steel 400 Series 416, 420, etc	Bar	11.8	5.9	5.2	3.8	3.5	2	3.1	22.7	16.5	17.9	17.2	13.1
	스테인레스강 Stainless Steel 300 Series 304, 316, 17-4PH, etc	Bar	11.8	5.9	5.2	3.8	3.5	2	3.1	22.7	16.5	17.9	17.2	13.1
N 비철금속 Nonferrous metals	알루미늄 Aluminium 2014, 6061, 7075, etc	Bar	14.5	12.4	15.8	11	8.6	3.5	5.5	24.1	22	21.7	19.6	13.8
	알루미늄 Aluminium 2014, 6061, 7075, etc	Bar	10	14	23	34	31	125	159	13.4	18.8	29	47.2	77
S 내열합금 Super-alloys and titanium	내열합금 High Temp Alloy Hastelloy B, Inconel 600, etc	Bar	10~11	4~5	3~4	2	2	2	3	17	11	12	11	9
	내열합금 High Temp Alloy Hastelloy B, Inconel 600, etc	Bar	8.7~9.1	8.3~8.7	11.7~12.1	15.1~18.9	26.5~30.3	87~98	125	11.1	13.5	21.9	35.4	62
	고강도 합금강 High Strength Alloy 4340, 4330V, 300M, etc	Bar	10~11	4	3	2	2	1~2	2	15	5	4	3	3
고강도 합금강 High Strength Alloy 4340, 4330V, 300M, etc	Bar	8.7~9.1	7.9~8.3	11.0~11.7	15.1~18.9	26.5~30.3	79~89	87~98	10.4	9.1	12.6	18.8	33.6	

Holder	Extended	Long	XL	3XL
Pressure & Flow	1.3	1.5	2	3

Coolant Recommendation Example :

If the recommended pressure and flow is 10bar and 25 LPM for a standard length holder, the adjusted pressure and flow would be 30bar and 75LPM respectively for the 3XL holder.

ex) $10 \times 3 = 30\text{bar}$ $25 \times 3 = 75\text{LPM}$



Max Recommended COS Speed

Item	Max Recommended RPM
COS - 190522	3500
COS - 254028	2500
COS - 317535	2000
COS - 444535	1500
COS - 571544	1100

NOTE : Max recommended pressure is 600 PSI (42 bar)

NOTE : Recommendations above are based on water and oil based coolants



WARNING

드릴링 중에 COS가 회전하면 호스 또는 호스 피팅 고장, 기계 등의 원인이 될수 있습니다. 스톱바 조립 및 올바른 위치에 스톱스터드를 설치하여 예방해 주세요.

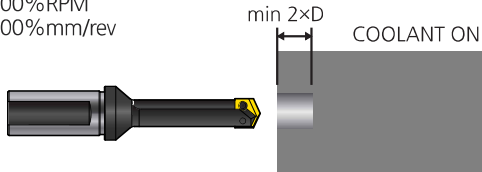
COS rotation during drilling can cause hose and / or hose fitting failure, machinery damage and / or serious injury. To prevent, use stop bar and positive stop studs when drilling.

깊은 홀 가공 방법 Deep Hole Drilling Guideline

For use with BPK drills greater than 9D, including Extended, Long, XL, 3XL and Special long drill.

STEP1. Pilot Drill

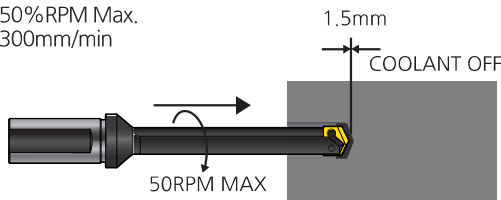
100%RPM
100%mm/rev



- 최소 2D까지 같은 구경의 짧은 드릴로 초기 구멍작업
Establish the pilot hole using the same diameter short drill to a depth of a 2D minimum
- 포인트 앵글을 포함한 것 보다 같거나 더 큰 초기 가공홀 드릴을 이용
Utilize a pilot drill with the same or larger included point angle.

STEP2. Feed In

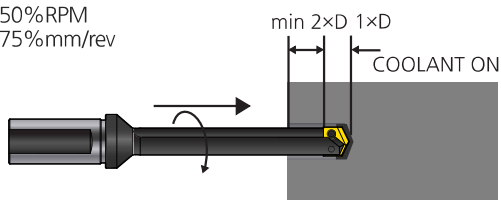
50%RPM Max.
300mm/min



- 최대 50RPM과 이송값 300mm/min으로 초기 가공홀에서 더 길이가 긴 드릴을 1.5mm(1/16") 이내로 가공
Feed the longer drill within 1.5mm(1/16") short of the established pilot hole bottom at a maximum of 50RPM and 300mm/min feed rate

STEP3. Deep Hole Transition Drilling

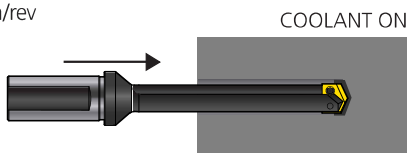
50%RPM
75%mm/rev



- 추천하는 절삭값의 50%와 이송값을 25% 감소 시켜 추가로 1D를 초기 가공홀에서 더 가공
Drill additional 1xD passed bottom of pilot hole at 50% reduction of recommended speed and 25% reduction of recommend feed
- 피삭재 이송을 하기 전 추천 절삭값으로 속도를 끌어올리기 위해 최소 1초 동안 머물러 작업
Minimum of 1 second dwell is required meet full speed before feeding

STEP4. Deep Hole Drilling-Blind

100%RPM
100%mm/rev

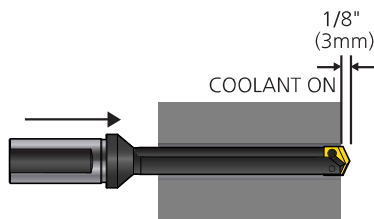


- BPK Inc에서 제공하는 절삭값으로 가공 깊이까지 가공
Drill to full depth at recommended speed and feed for longer drills according to cutting data which belongs to BPK Inc.

**⚠ *Peck cycle은 권장하지 않습니다.
No peck cycle recommended**

STEP5. Deep Hole Drilling-Through

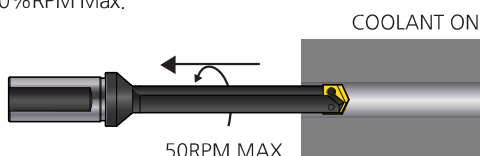
50%RPM
75%mm/rev



- 피삭재를 관통하는 경우에만 적용하세요.
For through holes only
- 관통하기 전에 속도는 50%감소 이송값은 25%까지 감소
Reduce speed by 50% and feed by 25% prior to break out
- 3mm(1/8")이상 드릴을 관통시키지 말 것
Do not break out more than 3mm(1/8") past the full diameter of drill

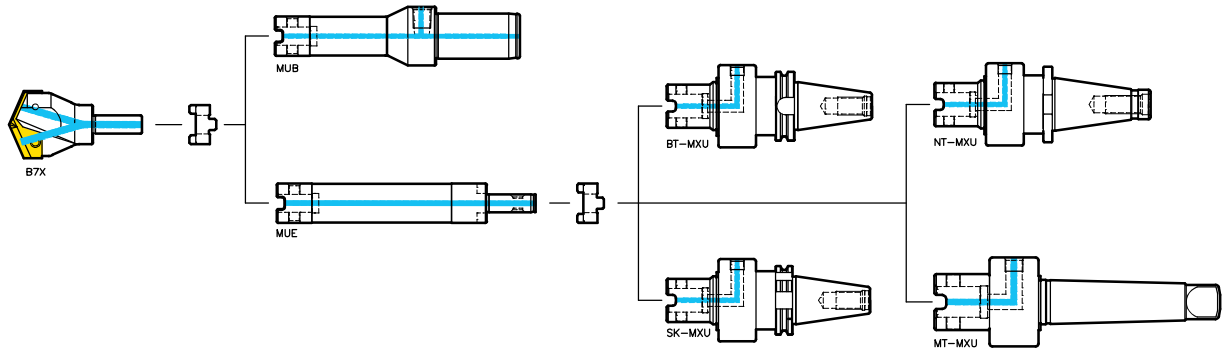
STEP6. Drill Retract

50%RPM Max.



- 드릴이 가공홀을 돌아오기 전에 최대 50RPM까지 속도를 낮춤
Reduce speed to maximum of 50 RPM before retracting from hole

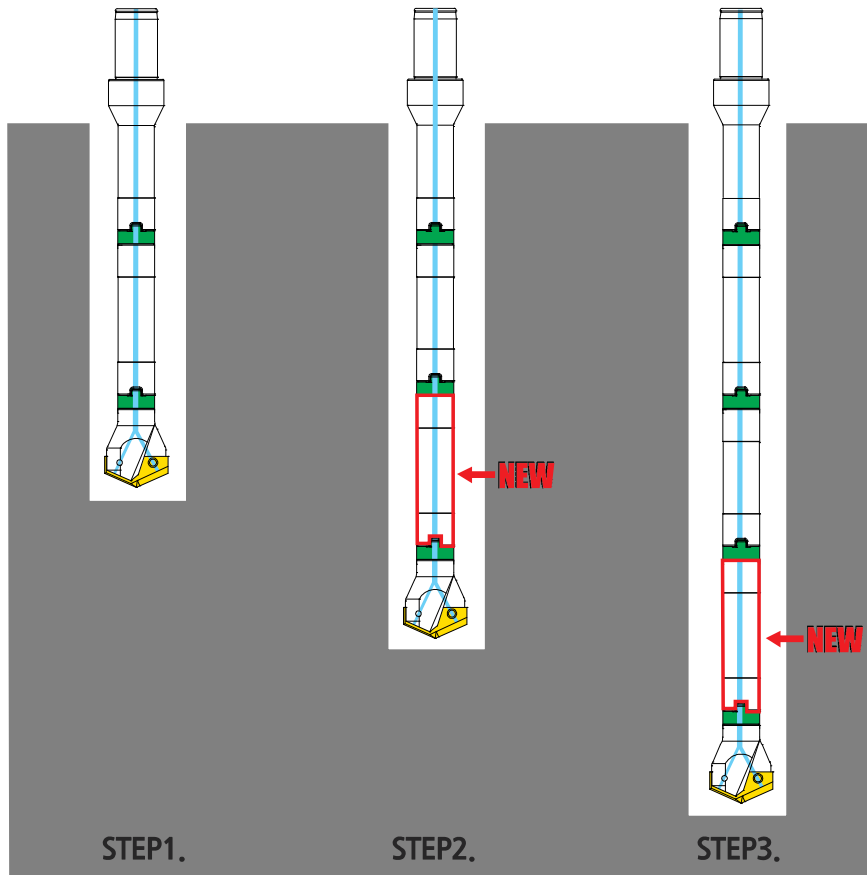
모듈라 헤드 사용법 B7X Modular Head Guideline



WARNING

1. 확장바를 두개 이상 연결하거나 extension과 reducers 를 연결하지 마시오.
Do not exceed 2extension or extension plus reducers
 2. 필요에 의해 2개 이상의 extension 바를 연결해야 하는 경우 첫 번째 extension의 가공 홀 깊이 만큼 가공 후에 연결해서 추가가공하세요.
When you need to assemble exceed 2 extension, after making first hole with the one extension and then add another extension.
- * 알림사항 : 2번 절차를 수행하는 경우 가공 홀 표면이 고르지 못할 수 있습니다.
Please be noted : if you take the No.2 procedure, surface of the hole would't be even.

추천조립사용법



B7X 추천 조립법 B7X Recommended Assemble

TOP



**BOTTOM
READY**
Clean all parts

STEP1.
B7X

STEP2.
MUE or MUB

FINISH

NOTE :

1. 모든부속품을 깨끗이 닦으세요.
Make sure to clean all parts to assemble PKR
2. 제공되는 렌치를 이용해 시계방향으로 밀어준 후 조립해주세요.
Assembly with JTB screw after push each parts clock wise.