Choose From KoreaTechnics Drill

ø11.5 13 18 25 30 45 50 60 80 180

V-MAX DRILL

VMD
1×D~8×D
<MX Modular>

TURBO DRILL

VLT
5×D 6.5×D 8×D

TMD
5×D 8×D

FXD
4×D 6×D 8×D
[ø30~Due to relese later]

HIGH SPEED DRILL

KSD
2×D 3×D 4×D

HSD-V, MCD
2×D 3×D 4×D

STD-V
2×D 3×D 4×D

ø11.5 13 18 25 30 45 50 60 80 180

High Speed Drill

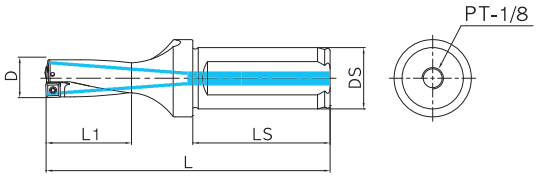
KSD

▶ **Standard 'B' Type**

KSD - 2854D S32

- KSD: 드릴종류 / Drill group
- 2854: 가공직경:Φ28.5 / Drilling diameter:Φ28.5
- 4D: 기공깊이:가공직경의 4배 / Drilling depth:Dia×4
- S32: 생크직경 : Φ32 / Shank diameter:Φ32

HIGH SPEED DRILL
KSD 2×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-1302D-S20	13.0	29	99	20	50	XOMT040204 PD	SPMT040204 PD	TSB-20045	TXL-6
KSD-1352D-S20	13.5	30	100						
KSD-1402D-S20	14.0	31	101			XOMT050204 PD	SPMT050204 PD		
KSD-1452D-S20	14.5	32	102						
KSD-1502D-S20	15.0	33	103						
KSD-1552D-S20	15.5	34	104						
KSD-1602D-S20	16.0	35	105						
KSD-1652D-S25	16.5	36	117	25	56	XOMT060204 PD	SPMT060205 PD	TSB-22052	
KSD-1702D-S25	17.0	37	118						
KSD-1752D-S25	17.5	38	119						
KSD-1802D-S25	18.0	39	120						
KSD-1852D-S25	18.5	40	121						
KSD-1902D-S25	19.0	41	122						
KSD-1952D-S25	19.5	42	123						
KSD-2002D-S25	20.0	43	124			XOMT07T205 PD	SPMT07T208 PD	TSB-25065	TXL-8
KSD-2052D-S25	20.5	44	125						
KSD-2102D-S25	21.0	45	126						
KSD-2152D-S25	21.5	46	127						
KSD-2202D-S25	22.0	47	128						
KSD-2252D-S25	22.5	48	129						
KSD-2302D-S25	23.0	49	130						
KSD-2352D-S25	23.5	50	131						

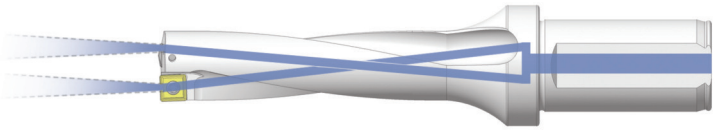
● KSD 드릴 특징 KSD Drill Characteristic

- 내인과 외인의 가공 특성에 맞춘 인서트 사용으로 절삭성능과 칩처리성, 수명이 우수함.
- Excellent cutting performance and chip control due to the optimized chip breaker geometry of both inserts, central & peripheral.

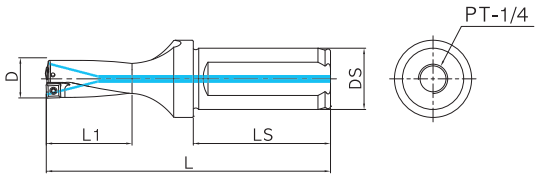
내측 인서트
Central Insert

외측 인서트
Peripheral Insert

- KSD 소구경(ø13~ø23.5) 드릴은 절삭유 방식을 개선하여 칩플루트 공간이 넓어져 칩 처리성이 우수함.
- Small Dia. drills (ø13~ø23.5) are designed with oil holes and the optimized shape of the flute increases the rigidity of the drill while body improves chip evacuation



- KSD 직부형 중대구경(ø24~ø60) 드릴은 최적의 설계로 칩 배출 공간을 대폭 확장 시켰습니다.
  깊은 홀 가공에서도 드릴링이 안정되고, 표면조도가 우수합니다.
- The chip discharging space for KSD middle dia and big dia drill(ø24~ø60)was greately extended.
  These drills are stable and surface roughless are excellent in the deep hole drilling also.



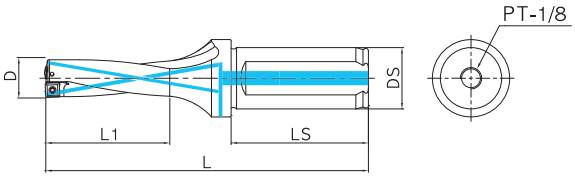
● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-2402D-S32	24.0	51	141	32	60	XOMT090305 PD	SPMT090308 PD	TSB-30072	TXL-8
KSD-2452D-S32	24.5	52	142						
KSD-2502D-S32	25.0	53	143						
KSD-2552D-S32	25.5	54	144						
KSD-2602D-S32	26.0	55	145						
KSD-2652D-S32	26.5	56	146						
KSD-2702D-S32	27.0	57	147						
KSD-2752D-S32	27.5	58	148						
KSD-2802D-S32	28.0	59	149						
KSD-2852D-S32	28.5	60	150						
KSD-2902D-S32	29.0	61	151						
KSD-2952D-S32	29.5	62	152						
KSD-3002D-S32	30.0	65	155			XOMT11T306 PD	SPMT11T308 PD	TSB-35080	TXL-15
KSD-3102D-S32	31.0	67	157						
KSD-3202D-S32	32.0	69	159						
KSD-3302D-S32	33.0	71	161						
KSD-3402D-S32	34.0	73	163						
KSD-3502D-S32	35.0	75	165						
KSD-3602D-S40	36.0	77	182	40	70	XOMT130406 PD	SPMT130410 PD	TSB-40100	
KSD-3702D-S40	37.0	79	184						
KSD-3802D-S40	38.0	81	186						
KSD-3902D-S40	39.0	83	188						
KSD-4002D-S40	40.0	85	190						
KSD-4102D-S40	41.0	87	192						
KSD-4202D-S40	42.0	89	194						
KSD-4302D-S40	43.0	91	196			XOMT15M508 PD	SPMT15M510 PD	TSB-50125	TXL-20
KSD-4402D-S40	44.0	93	198						
KSD-4502D-S40	45.0	95	200						
KSD-4602D-S40	46.0	97	202						
KSD-4702D-S40	47.0	99	204						
KSD-4802D-S40	48.0	101	206						
KSD-4902D-S40	49.0	103	208						
KSD-5002D-S40	50.0	105	210						
KSD-5102D-S40	51.0	107	212			XOMT180508 PD	SPMT180510 PD		
KSD-5202D-S40	52.0	109	214						
KSD-5302D-S40	53.0	111	216						
KSD-5402D-S40	54.0	113	218						
KSD-5502D-S40	55.0	115	220						
KSD-5602D-S40	56.0	117	222						
KSD-5702D-S40	57.0	119	224						
KSD-5802D-S40	58.0	121	226						
KSD-5902D-S40	59.0	123	228						
KSD-6002D-S40	60.0	125	230						

※ 범용선반 작업할 경우, 가공직경 ø40 이상이면 VLT나, VMD 사용을 권장합니다.
KSD와 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, VMD
The tool holder that locks with KSD is Side Lock Arbor.(p.78~p.90)

HIGH SPEED DRILL
KSD 3×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-1303D-S20	13.0	42	112	20	50	XOMT040204 PD	SPMT040204 PD	TSB-20045	TXL-6
KSD-1353D-S20	13.5	44	114						
KSD-1403D-S20	14.0	45	115			XOMT050204 PD	SPMT050204 PD		
KSD-1453D-S20	14.5	47	117						
KSD-1503D-S20	15.0	48	118						
KSD-1553D-S20	15.5	50	120						
KSD-1603D-S20	16.0	51	121						
KSD-1653D-S25	16.5	53	134	25	56	XOMT060204 PD	SPMT060205 PD	TSB-22052	
KSD-1703D-S25	17.0	54	135						
KSD-1753D-S25	17.5	56	137						
KSD-1803D-S25	18.0	57	138						
KSD-1853D-S25	18.5	59	140						
KSD-1903D-S25	19.0	60	141						
KSD-1953D-S25	19.5	62	143						
KSD-2003D-S25	20.0	63	144			XOMT07T205 PD	SPMT07T208 PD	TSB-25065	TXL-8
KSD-2053D-S25	20.5	65	146						
KSD-2103D-S25	21.0	66	147						
KSD-2153D-S25	21.5	68	149						
KSD-2203D-S25	22.0	69	150						
KSD-2253D-S25	22.5	71	152						
KSD-2303D-S25	23.0	72	153						
KSD-2353D-S25	23.5	74	155						

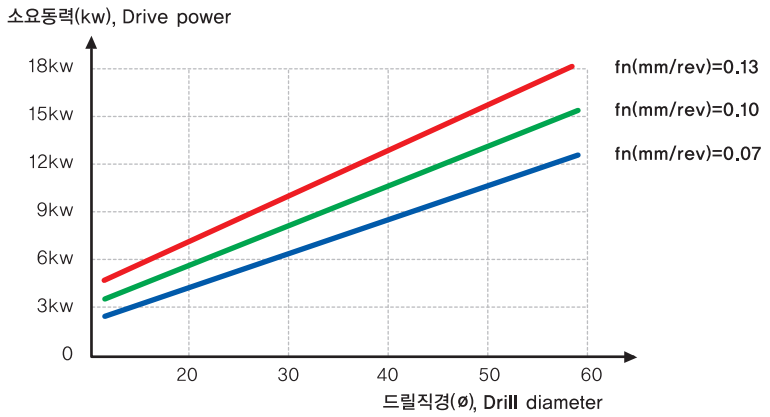
※ 최고의 결과물을 위해서는 절삭조건표(123페이지)와 절삭유 적정 압력을 확인해 주세요.(절삭유 적정압력은 5kg/㎠ 이상입니다.)
※ Please make sure the proper oil pressure and the cutting date(P.123)for the best performance.(The proper pressure is over 5kg/㎠)

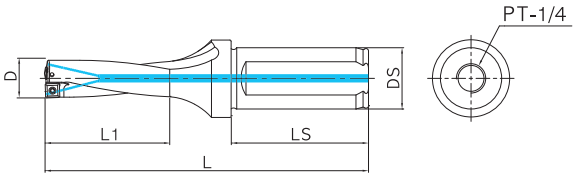
● KSD 드릴 홀 공차 Hole tolerance of KSD drill

Diameter	2×D	3×D	4×D
ø13 ~ø23.5	-0.10 ~ +0.15	-0.10 ~ +0.18	-0.12 ~ +0.20
ø30 ~ø42	-0.10 ~ +0.15	-0.12 ~ +0.22	-0.12 ~ +0.25
ø43 ~ø60	-0.10 ~ +0.20	-0.12 ~ +0.25	-0.15 ~ +0.27

※ 홀 공차는 드릴의 길이, 피삭재, 장비, 가공조건 등에 따라 차이가 생길 수 있습니다.
※ The length of drill, kind of workpiece, machine stability, and cutting condition could affect the hole tolerance.

● 소요동력 Power Requirements





● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-2403D-S32	24.0	75	165	32	60	XOMT090305 PD	SPMT090308 PD	TSB-30072	TXL-8
KSD-2453D-S32	24.5	77	167						
KSD-2503D-S32	25.0	78	168						
KSD-2553D-S32	25.5	80	170						
KSD-2603D-S32	26.0	81	171						
KSD-2653D-S32	26.5	83	173						
KSD-2703D-S32	27.0	84	174						
KSD-2753D-S32	27.5	86	176						
KSD-2803D-S32	28.0	87	177						
KSD-2853D-S32	28.5	89	179						
KSD-2903D-S32	29.0	90	180						
KSD-2953D-S32	29.5	92	182						
KSD-3003D-S32	30.0	95	185			XOMT11T306 PD	SPMT11T308 PD	TSB-35080	TXL-15
KSD-3103D-S32	31.0	98	188						
KSD-3203D-S32	32.0	101	191						
KSD-3303D-S32	33.0	104	194						
KSD-3403D-S32	34.0	107	197						
KSD-3503D-S32	35.0	110	200						
KSD-3603D-S40	36.0	113	218	40	70	XOMT130406 PD	SPMT130410 PD	TSB-40100	
KSD-3703D-S40	37.0	116	221						
KSD-3803D-S40	38.0	119	224						
KSD-3903D-S40	39.0	122	227						
KSD-4003D-S40	40.0	125	230						
KSD-4103D-S40	41.0	128	233						
KSD-4203D-S40	42.0	131	236						
KSD-4303D-S40	43.0	134	239			XOMT15M508 PD	SPMT15M510 PD	TSB-50125	TXL-20
KSD-4403D-S40	44.0	137	242						
KSD-4503D-S40	45.0	140	245						
KSD-4603D-S40	46.0	143	248						
KSD-4703D-S40	47.0	146	251						
KSD-4803D-S40	48.0	149	254						
KSD-4903D-S40	49.0	152	257						
KSD-5003D-S40	50.0	155	260						
KSD-5103D-S40	51.0	158	263			XOMT180508 PD	SPMT180510 PD		
KSD-5203D-S40	52.0	161	266						
KSD-5303D-S40	53.0	164	269						
KSD-5403D-S40	54.0	167	272						
KSD-5503D-S40	55.0	170	275						
KSD-5603D-S40	56.0	173	278						
KSD-5703D-S40	57.0	176	281						
KSD-5803D-S40	58.0	179	284						
KSD-5903D-S40	59.0	182	287						
KSD-6003D-S40	60.0	185	290						

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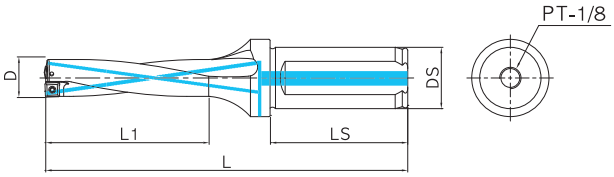
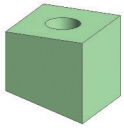
HIGH SPEED DRILL
KSD 4×D

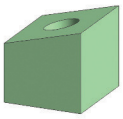


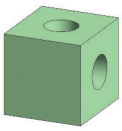
● Shank ISO9766, Parallel with clamping flat

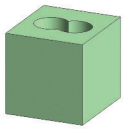
Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-1304D-S20	13.0	55	125	20	50	XOMT040204 PD	SPMT040204 PD	TSB-20045	TXL-6
KSD-1354D-S20	13.5	57	127						
KSD-1404D-S20	14.0	59	129			XOMT050204 PD	SPMT050204 PD		
KSD-1454D-S20	14.5	61	131						
KSD-1504D-S20	15.0	63	133						
KSD-1554D-S20	15.5	65	135						
KSD-1604D-S20	16.0	67	137						
KSD-1654D-S25	16.5	69	150	25	56	XOMT060204 PD	SPMT060205 PD	TSB-22052	
KSD-1704D-S25	17.0	71	152						
KSD-1754D-S25	17.5	73	154						
KSD-1804D-S25	18.0	75	156						
KSD-1854D-S25	18.5	77	158						
KSD-1904D-S25	19.0	79	160						
KSD-1954D-S25	19.5	81	162						
KSD-2004D-S25	20.0	83	164			XOMT07T205 PD	SPMT07T208 PD	TSB-25065	TXL-8
KSD-2054D-S25	20.5	85	166						
KSD-2104D-S25	21.0	87	168						
KSD-2154D-S25	21.5	89	170						
KSD-2204D-S25	22.0	91	172						
KSD-2254D-S25	22.5	93	174						
KSD-2304D-S25	23.0	95	176						
KSD-2354D-S25	23.5	97	178						

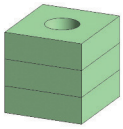
※ 불규칙한 면을 가공할 경우에는 이송속도를 30%~50% 줄여 가공하여 주시기 바랍니다.
※ When working on irregular (uneven) surfaces, please reduce the feed rate by 30~50%.


경사면 가공
Inclined Surface


경사면 가공
Inclined Surface


교차홀 가공
Crossing Hole


겹친홀 가공
Chain Drilling


겹판 가공
Stack Drilling

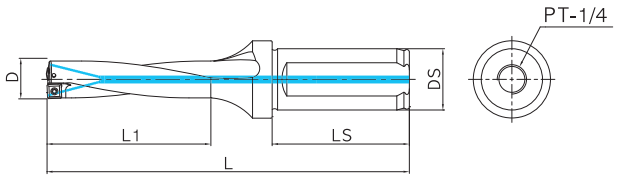
※ KSD용 인서트(SPMT, XOMT)는 109페이지를 참조해주세요.
※ Please refer to the page 109 regarding KSD inserts.(SPMT, XOMT)

• XOMT
내측 Central Insert

• SPMT
외측 Peripheral Insert

• KSD 드릴 가공 동영상을 보시려면, 오른쪽 QR코드를 스캔하세요.
• Please scan the QR code if you want to see KSD drill testing sample video.

KSD VIDEO



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert		부품 Component	
	D	L1	L	Ds	Ls	내측	외측	Screw	T-Driver
KSD-2404D-S32	24.0	99	189	32	60	XOMT090305 PD	SPMT090308 PD	TSB-30072	TXL-8
KSD-2454D-S32	24.5	101	191						
KSD-2504D-S32	25.0	103	193						
KSD-2554D-S32	25.5	105	195						
KSD-2604D-S32	26.0	107	197						
KSD-2654D-S32	26.5	109	199						
KSD-2704D-S32	27.0	111	201						
KSD-2754D-S32	27.5	113	203						
KSD-2804D-S32	28.0	115	205						
KSD-2854D-S32	28.5	117	207						
KSD-2904D-S32	29.0	119	209						
KSD-2954D-S32	29.5	121	211						
KSD-3004D-S32	30.0	125	215			XOMT11T306 PD	SPMT11T308 PD	TSB-35080	TXL-15
KSD-3104D-S32	31.0	129	219						
KSD-3204D-S32	32.0	133	223						
KSD-3304D-S32	33.0	137	227						
KSD-3404D-S32	34.0	141	231						
KSD-3504D-S32	35.0	145	235						
KSD-3604D-S40	36.0	149	254	40	70	XOMT130406 PD	SPMT130410 PD	TSB-40100	
KSD-3704D-S40	37.0	153	258						
KSD-3804D-S40	38.0	157	262						
KSD-3904D-S40	39.0	161	266						
KSD-4004D-S40	40.0	165	270						
KSD-4104D-S40	41.0	169	274						
KSD-4204D-S40	42.0	173	278						
KSD-4304D-S40	43.0	177	282			XOMT15M508 PD	SPMT15M510 PD	TSB-50125	TXL-20
KSD-4404D-S40	44.0	181	286						
KSD-4504D-S40	45.0	185	290						
KSD-4604D-S40	46.0	189	294						
KSD-4704D-S40	47.0	193	298						
KSD-4804D-S40	48.0	197	302						
KSD-4904D-S40	49.0	201	306						
KSD-5004D-S40	50.0	205	310						
KSD-5104D-S40	51.0	209	314			XOMT180508 PD	SPMT180510 PD		
KSD-5204D-S40	52.0	213	318						
KSD-5304D-S40	53.0	217	322						
KSD-5404D-S40	54.0	221	326						
KSD-5504D-S40	55.0	225	330						
KSD-5604D-S40	56.0	229	334						
KSD-5704D-S40	57.0	233	338						
KSD-5804D-S40	58.0	237	342						
KSD-5904D-S40	59.0	241	346						
KSD-6004D-S40	60.0	245	350						

※ 범용선반 작업할 경우, 가공직경 ø40 이상이면 VLT나, VMD 사용을 권장합니다.
KSD와 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, VMD
The tool holder that locks with KSD is Side Lock Arbor.(P.78~P.90)

Construction System of HIGH SPEED DRILL's Code No.

▶ Standard 'A' Type

HSD-V29530D S32

- HSD-V: 드릴종류 / Drill group
- 29: 가공직경:Φ29.5 / Drilling diameter:Φ29.5
- 30D: 기공깊이:가공직경의 3배 / Drilling depth:Dia×3
- S32: 생크직경 : Φ32 / Shank diameter:Φ32

▶ Adjustment Type

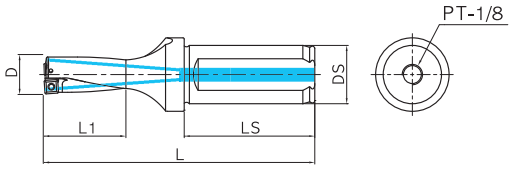
STD-V606520D S40

- STD-V: 드릴종류 / Drill group
- 60: 가공직경:Φ60~Φ65(조절타입) / Drilling diameter:Φ60~Φ65(Adjustable)
- 20D: 기공깊이:가공직경의 2배 / Drilling depth:Dia×2
- S40: 생크직경 : Φ40 / Shank diameter:Φ40

High Speed Drill

STD-V & HSD-V & MCD

HIGH SPEED DRILL
STD-V 2×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V13020D S20	13.0	29	99	20	50	SPMX050204	TSB-20045	TXL-6
STD-V13520D S20	13.5	30	100					
STD-V14020D S20	14.0	31	101					
STD-V14520D S20	14.5	32	102					
STD-V15020D S20	15.0	33	103					
STD-V15520D S25	15.5	34	115	25	56	SPMX060204	TSB-22052	
STD-V16020D S25	16.0	35	116					
STD-V16520D S25	16.5	36	117					
STD-V17020D S25	17.0	37	118					
STD-V17520D S25	17.5	38	119					
STD-V18020D S25	18.0	39	120					
STD-V18520D S25	18.5	40	121					
STD-V19020D S25	19.0	41	122					
STD-V19520D S25	19.5	42	123					
STD-V20020D S25	20.0	43	124					
STD-V20520D S25	20.5	44	125					
STD-V21020D S25	21.0	45	126					
STD-V21520D S25	21.5	46	127					

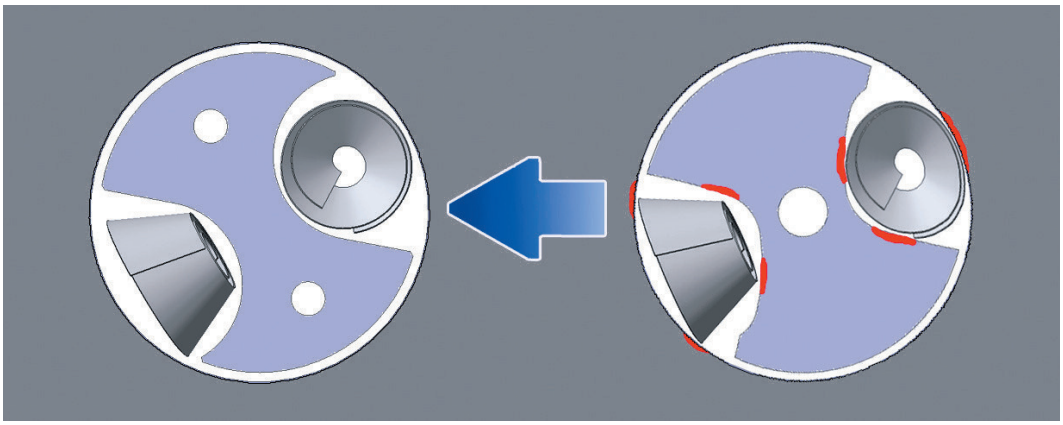
● STD-V 소구경 드릴의 특징

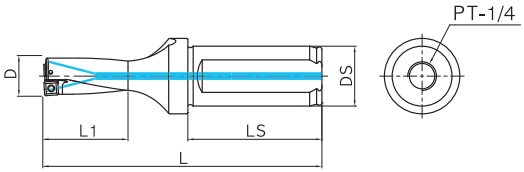
- STD-V 소구경(ø13 ~ ø21.5)드릴은 절삭유 홀을 11자 타입으로 설계변경하여 드릴바디의 강성이 향상되고, 칩 배출 공간을 대폭 확장 시켰습니다.
- 최적의 설계로 절삭성능이 뛰어나고, 표면조도가 매우 우수합니다.

● The characteristic of STD-V small drill

- Small dia drills are designed oil holes to 11 types so the hardness of the drill body is improved and the space of chip break is greately extended.
- The drilling performance and the surface roughless are excellent by the best design.

- 넓어진 칩 배출 공간 The widen chip discharging space





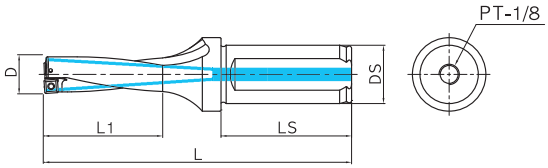
Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V22020D S32	22.0	47	137	32	60	SPMX07T308	TSB-25065	TXL-6
STD-V22520D S32	22.5	48	138					
STD-V23020D S32	23.0	49	139					
STD-V23520D S32	23.5	50	140					
STD-V24020D S32	24.0	51	141					
STD-V24520D S32	24.5	52	142					
STD-V25020D S32	25.0	53	143					
STD-V25520D S32	25.5	54	144					
STD-V26020D S32	26.0	55	145					
STD-V26520D S32	26.5	56	146					
STD-V27020D S32	27.0	57	147					
STD-V27520D S32	27.5	58	148					
STD-V28020D S32	28.0	59	149			SPMX090408	TSB-35090	TXL-15
STD-V28520D S32	28.5	60	150					
STD-V29020D S32	29.0	61	151					
STD-V29520D S32	29.5	63	153					
STD-V30020D S32	30.0	65	155					
STD-V31020D S32	31.0	67	157					
STD-V32020D S32	32.0	69	159					
STD-V33020D S32	33.0	71	161					
STD-V34020D S40	34.0	73	178	40	70	SPMX110408	TSB-40100	
STD-V35020D S40	35.0	75	180					
STD-V36020D S40	36.0	77	182					
STD-V37020D S40	37.0	79	184					
STD-V38020D S40	38.0	81	186					
STD-V39020D S40	39.0	83	188					
STD-V40020D S40	40.0	85	190					
STD-V41020D S40	41.0	87	192					
STD-V42020D S40	42.0	89	194			SPMX140512	TSB-50125	TXL-20
STD-V43020D S40	43.0	91	196					
STD-V44020D S40	44.0	93	198					
STD-V45020D S40	45.0	95	200					
STD-V46020D S40	46.0	97	202					
STD-V47020D S40	47.0	99	204					
STD-V48020D S40	48.0	101	206					
STD-V49020D S40	49.0	103	208					
STD-V50020D S40	50.0	105	210					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
STD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.
※ 불규칙한 면을 가공할 경우에는 이송속도를 30%~50% 줄여 가공하여 주시기 바랍니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with STD-V is Side Lock Arbor.(P.78~P.90)
※ When working on irregular (uneven) surfaces, please reduce the feed rate by 30~50%.

HIGH SPEED DRILL
STD-V 3×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V13030D S20	13.0	42	112	20	50	SPMX050204	TSB-20045	TXL-6
STD-V13530D S20	13.5	44	114					
STD-V14030D S20	14.0	45	115					
STD-V14530D S20	14.5	47	117					
STD-V15030D S20	15.0	48	118					
STD-V15530D S25	15.5	50	131	25	56	SPMX060204	TSB-22052	
STD-V16030D S25	16.0	51	132					
STD-V16530D S25	16.5	53	134					
STD-V17030D S25	17.0	54	135					
STD-V17530D S25	17.5	56	137					
STD-V18030D S25	18.0	57	138					
STD-V18530D S25	18.5	59	140					
STD-V19030D S25	19.0	60	141					
STD-V19530D S25	19.5	62	143					
STD-V20030D S25	20.0	63	144					
STD-V20530D S25	20.5	65	146					
STD-V21030D S25	21.0	66	147					
STD-V21530D S25	21.5	68	149					

● STD-V 중 · 대구경 드릴의 특징

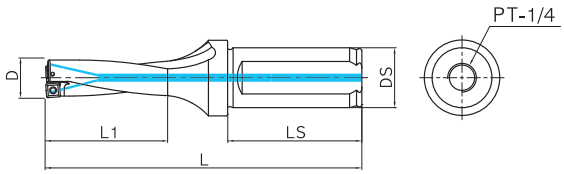
- STD-V 중 · 대구경(ø22~ø80)드릴은 최적의 설계로 칩 배출 공간을 대폭 확장 시켰습니다.
  깊은 홀 가공에서도 드릴링이 안정되고, 표면조도가 우수합니다.
- 최적의 결과물을 위해, 절삭조건표(125페이지)와 절삭유 적정 압력을 확인해 주세요.
  (절삭유 적정압력은, STD-V 2×D,3×D일때 4kg/㎠이상, 4×D일때 5kg/㎠이상)

● The characteristic of STD-V middle and big diameter drills

- The chip discharging space for STD-V middle dia and big dia drill(ø22~ø80)was greately extended.
  These drills are stable and surface roughness are excellent in the deep hole drilling also.
- Please make sure the proper oil pressure and the cutting data(page 125)for the best performance.
  (The proper pressure for STD-V 2×D,3×D is over 4kg/㎠, the proper pressure for 4×D is over 5kg/㎠)

- STD-V 드릴용 인서트(SPMX)는 108페이지를 참조해주세요.
- Please refer to the page 108 regarding STD-V inserts.(SPMX)

- SPMX
  내측 + 외측
  Peripheral + Central Insert



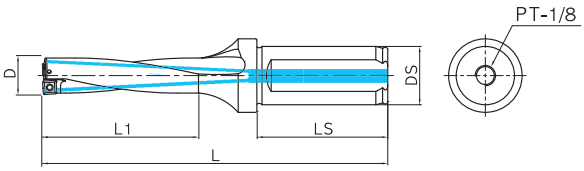
Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V22030D S32	22.0	69	159	32	60	SPMX07T308	TSB-25065	TXL-6
STD-V22530D S32	22.5	71	161					
STD-V23030D S32	23.0	72	162					
STD-V23530D S32	23.5	74	164					
STD-V24030D S32	24.0	75	165					
STD-V24530D S32	24.5	77	167					
STD-V25030D S32	25.0	78	168					
STD-V25530D S32	25.5	80	170					
STD-V26030D S32	26.0	81	171					
STD-V26530D S32	26.5	83	173					
STD-V27030D S32	27.0	84	174					
STD-V27530D S32	27.5	86	176					
STD-V28030D S32	28.0	87	177			SPMX090408	TSB-35090	TXL-15
STD-V28530D S32	28.5	89	179					
STD-V29030D S32	29.0	90	180					
STD-V29530D S32	29.5	93	183					
STD-V30030D S32	30.0	95	185					
STD-V31030D S32	31.0	98	188					
STD-V32030D S32	32.0	101	191					
STD-V33030D S32	33.0	104	194					
STD-V34030D S40	34.0	107	212	40	70	SPMX110408	TSB-40100	
STD-V35030D S40	35.0	110	215					
STD-V36030D S40	36.0	113	218					
STD-V37030D S40	37.0	116	221					
STD-V38030D S40	38.0	119	224					
STD-V39030D S40	39.0	122	227					
STD-V40030D S40	40.0	125	230					
STD-V41030D S40	41.0	128	233					
STD-V42030D S40	42.0	131	236			SPMX140512	TSB-50125	TXL-20
STD-V43030D S40	43.0	134	239					
STD-V44030D S40	44.0	137	242					
STD-V45030D S40	45.0	140	245					
STD-V46030D S40	46.0	143	248					
STD-V47030D S40	47.0	146	251					
STD-V48030D S40	48.0	149	254					
STD-V49030D S40	49.0	152	257					
STD-V50030D S40	50.0	155	260					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
STD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.
※ 불규칙한 면을 가공할 경우에는 이송속도를 30%~50% 줄여 가공하여 주시기 바랍니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with STD-V is Side Lock Arbor.(P.78~P.90)
※ When working on irregular (uneven) surfaces, please reduce the feed rate by 30~50%.

HIGH SPEED DRILL
STD-V 4×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V13040D S20	13.0	55	125	20	50	SPMX050204	TSB-20045	TXL-6
STD-V13540D S20	13.5	57	127					
STD-V14040D S20	14.0	59	129					
STD-V14540D S20	14.5	61	131					
STD-V15040D S20	15.0	63	133					
STD-V15540D S25	15.5	65	146	25	56	SPMX060204	TSB-22052	
STD-V16040D S25	16.0	67	148					
STD-V16540D S25	16.5	69	150					
STD-V17040D S25	17.0	71	152					
STD-V17540D S25	17.5	73	154					
STD-V18040D S25	18.0	75	156					
STD-V18540D S25	18.5	77	158					
STD-V19040D S25	19.0	79	160					
STD-V19540D S25	19.5	81	162					
STD-V20040D S25	20.0	83	164					
STD-V20540D S25	20.5	85	166					
STD-V21040D S25	21.0	87	168					
STD-V21540D S25	21.5	89	170					

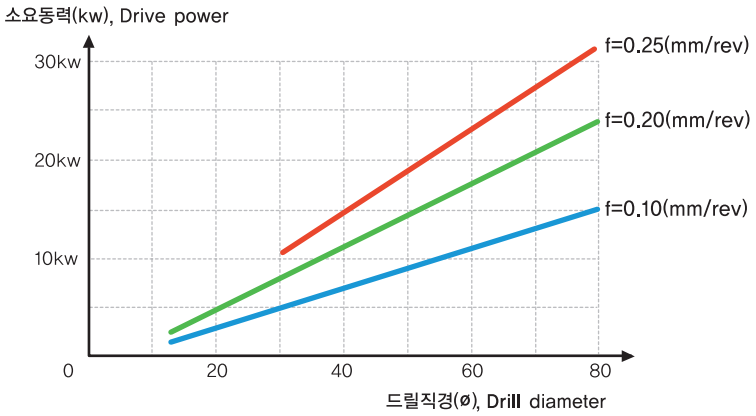
※ 최고의 결과물을 위해서는 절삭조건표(125페이지)와 절삭유 적정 압력을 확인해 주세요.(절삭유 적정압력은 5kg/㎠ 이상입니다.)
※ Please make sure the proper oil pressure and the cutting date(P.125)for the best performance.(The proper pressure is over 5kg/㎠)

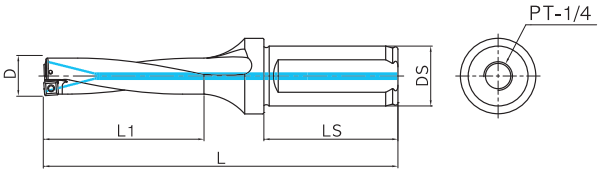
● STD-V 드릴 구멍공차 The hole tolerance of STD-V drill

Diameter	2×D	3×D	4×D
ø13 ~ø21.5	-0.10 ~ +0.15	-0.10 ~ +0.18	-0.15 ~ +0.20
ø22 ~ø50	-0.10 ~ +0.15	-0.12 ~ +0.20	-0.15 ~ +0.25
ø50 ~ø80	-0.15 ~ +0.20	-0.15 ~ +0.25	-0.15 ~ +0.30

※ 홀 공차는 드릴의 길이, 피삭재, 장비, 가공조건 등에 따라 차이가 생길 수 있습니다.
※ The length of drill, kind of workpiece, machine stability, and cutting condition could affect the hole tolerance.

● 소요동력 Power Requirements





● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
STD-V22040D S32	22.0	91	181	32	60	SPMX07T308	TSB-25065	TXL-6
STD-V22540D S32	22.5	93	183					
STD-V23040D S32	23.0	95	185					
STD-V23540D S32	23.5	97	187					
STD-V24040D S32	24.0	99	189					
STD-V24540D S32	24.5	101	191					
STD-V25040D S32	25.0	103	193					
STD-V25540D S32	25.5	105	195					
STD-V26040D S32	26.0	107	197					
STD-V26540D S32	26.5	109	199					
STD-V27040D S32	27.0	111	201					
STD-V27540D S32	27.5	113	203					
STD-V28040D S32	28.0	115	205			SPMX090408	TSB-35090	TXL-15
STD-V28540D S32	28.5	117	207					
STD-V29040D S32	29.0	120	210					
STD-V29540D S32	29.5	123	213					
STD-V30040D S32	30.0	125	215					
STD-V31040D S32	31.0	129	219					
STD-V32040D S32	32.0	133	223					
STD-V33040D S32	33.0	137	227					
STD-V34040D S40	34.0	141	246	40	70	SPMX110408	TSB-40100	
STD-V35040D S40	35.0	145	250					
STD-V36040D S40	36.0	149	254					
STD-V37040D S40	37.0	153	258					
STD-V38040D S40	38.0	157	262					
STD-V39040D S40	39.0	161	266					
STD-V40040D S40	40.0	165	270					
STD-V41040D S40	41.0	169	274					
STD-V42040D S40	42.0	173	278			SPMX140512	TSB-50125	TXL-20
STD-V43040D S40	43.0	177	282					
STD-V44040D S40	44.0	181	286					
STD-V45040D S40	45.0	185	290					
STD-V46040D S40	46.0	189	294					
STD-V47040D S40	47.0	193	298					
STD-V48040D S40	48.0	197	302					
STD-V49040D S40	49.0	201	306					
STD-V50040D S40	50.0	205	310					

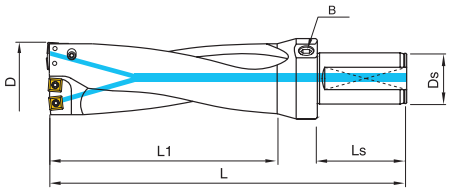
※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
STD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.
※ 불규칙한 면을 가공할 경우에는 이송속도를 30%~50% 줄여 가공하여 주시기 바랍니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with STD-V is Side Lock Arbor.(P.78~P.90)
※ When working on irregular (uneven) surfaces, please reduce the feed rate by 30~50%.

HIGH SPEED DRILL

STD-V BIG DIAMETER DRILL(CARTRIDGE TYPE)

STD-V 대구경 드릴(카트리지 타입)



● Shank ISO9766, Parallel with clamping flat

▶ STD-V 2×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					카트리지 Cartridge		인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls	내측 Inner	외측 Outer		Screw	T-Driver
STD-V505520D S40	50-55	110	220	40	70	STC-V5055N	STC-V5055T	SPMX090408	TSB-35090	TXL-15
STD-V556020D S40	55-60	120	230			STC-V5560N	STC-V5560T			
STD-V606520D S40	60-65	130	240			STC-V6065N	STC-V6065T	SPMX110408	TSB-40100	
STD-V657020D S40	65-70	140	260			STC-V6570N	STC-V6570T			
STD-V707520D S40	70-75	150	265			STC-V7075N	STC-V7075T			
STD-V758020D S40	75-80	160	268			STC-V7580N	STC-V7580T	SPMX140512	TSB-50125	TXL-20

▶ STD-V 3×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					카트리지 Cartridge		인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls	내측 Inner	외측 Outer		Screw	T-Driver
STD-V505530D S40	50-55	165	275	40	70	STC-V5055N	STC-V5055T	SPMX090408	TSB-35090	TXL-15
STD-V556030D S40	55-60	180	290			STC-V5560N	STC-V5560T			
STD-V606530D S40	60-65	195	305			STC-V6065N	STC-V6065T	SPMX110408	TSB-40100	
STD-V657030D S40	65-70	210	320			STC-V6570N	STC-V6570T			
STD-V707530D S40	70-75	225	335			STC-V7075N	STC-V7075T			
STD-V758030D S40	75-80	240	348			STC-V7580N	STC-V7580T	SPMX140512	TSB-50125	TXL-20

▶ STD-V 4×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					카트리지 Cartridge		인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls	내측 Inner	외측 Outer		Screw	T-Driver
STD-V505540D S40	50-55	220	330	40	70	STC-V5055N	STC-V5055T	SPMX090408	TSB-35090	TXL-15
STD-V556040D S40	55-60	240	350			STC-V5560N	STC-V5560T			
STD-V606540D S40	60-65	260	370			STC-V6065N	STC-V6065T	SPMX110408	TSB-40100	
STD-V657040D S40	65-70	280	390			STC-V6570N	STC-V6570T			
STD-V707540D S40	70-75	300	410			STC-V7075N	STC-V7075T			
STD-V758040D S40	75-80	320	428			STC-V7580N	STC-V7580T	SPMX140512	TSB-50125	TXL-20

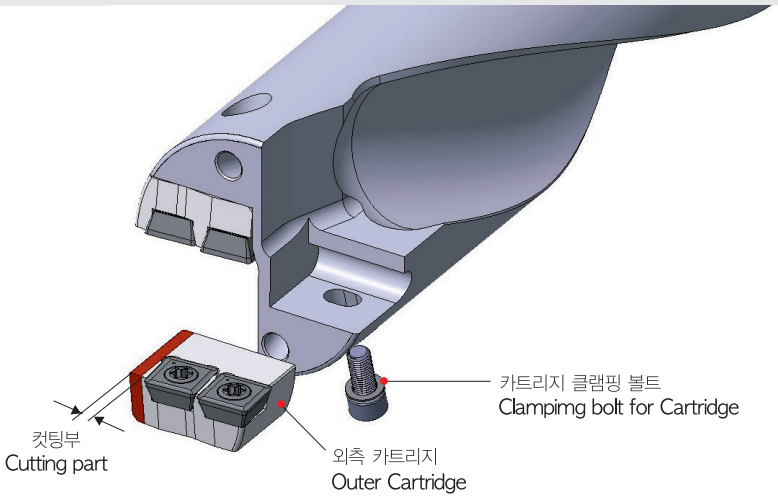
※ 범용선반 작업할 경우, 가공직경 ø40 이상이면 VLT나, VMD 사용을 권장합니다.
STD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with STD-V is Side Lock Arbor.(P.78~P.90)

• STD-V 드릴 가공 동영상을 보시려면, 오른쪽 QR코드를 스캔하세요.
• Please scan the QR code if you want to see STD-V drill testing sample video.

STD-V VIDEO

STD-V 대구경 드릴(카트리지 타입)셋팅 방법
THE SETTING PROCEDURES FOR THE BIG DIA DRILL(CARTRIDGE TYPE)



1) 외측카트리지를, 카트리지 클램핑 볼트를 풀어 바디에서 이탈시킨다.
   Loosen the clamping bolt of the outer cartridge and remove it from the drill body.

2) 외측카트리지의 측면 밀착부를, 가공하려는 직경을 계산하여 밀링작업을한다.
   Cut off the inside part, the comtacted side of the outer cartridge by milling after calculating the drilling diameter.

3) 컷팅된 외측카트리지의 날카로운 모서리면을 모따기 처리한다.
   Slick the sharp corner of the cut cartridge.

4) 외측카트리지를 틈이 발생되지 않도록 바디에 밀착시키면서 카트리지 클램핑 볼트로 단단히 고정한다.
   Adhere the cartridge closely to the drill body not happen gap and fix the cartridge with bolt tightly.

Example

STD-V606530D를 ø61로 셋팅한다면,
기본 직경은 ø65이므로 ø65-ø61=4→4÷2=2(반지름으로 계산), 2.0mm를 컷팅한다.

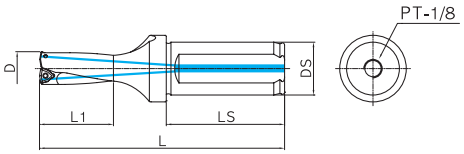
If you set STD-V606530D to ø61
The standard drill diameter is ø65 so ø65-ø61=4→4÷2=2(calculation by semidiameter), 2.0mm is cut off

Notice!

STD-V 대구경과 STD 대구경은 셋팅방법이 다르며, 카트리지 호환이 안됩니다.

The setting procedures is different from the big dia STD-V drill and STD drill and the cartridges is not interchangeable.

HIGH SPEED DRILL
HSD-V 2×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V13020D S20	13.0	29	99	20	50	WCMX03T104	TSB-18045	TXL-6
HSD-V13520D S20	13.5	30	100					
HSD-V14020D S20	14.0	31	101					
HSD-V14520D S20	14.5	32	102					
HSD-V15020D S20	15.0	33	103					
HSD-V15520D S25	15.5	34	104					
HSD-V16020D S25	16.0	35	116	25	56	WCMX030204	TSB-22045	
HSD-V16520D S25	16.5	36	117					
HSD-V17020D S25	17.0	37	118					
HSD-V17520D S25	17.5	38	119					
HSD-V18020D S25	18.0	39	120					
HSD-V18520D S25	18.5	40	121					
HSD-V19020D S25	19.0	41	122					
HSD-V19520D S25	19.5	42	123					
HSD-V20020D S25	20.0	43	124					

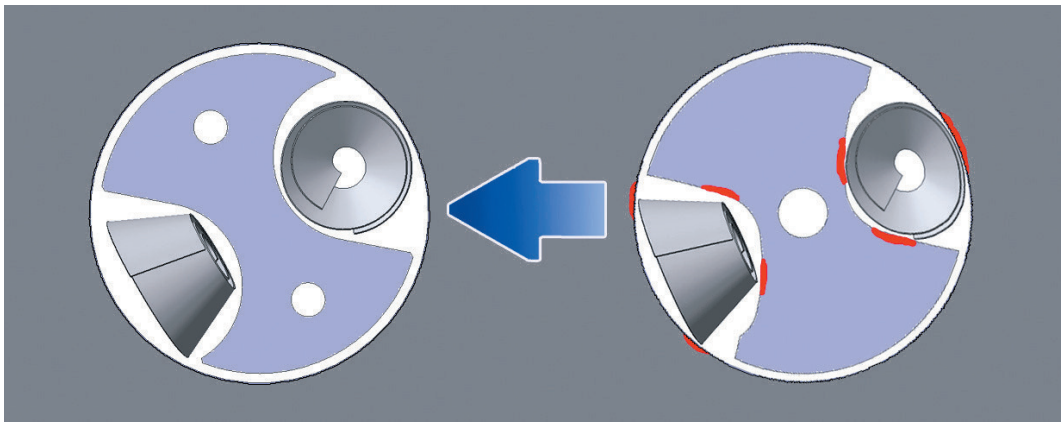
● HSD-V 소구경 드릴의 특징

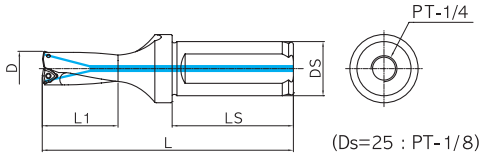
- HSD-V 소구경(ø13 ~ ø20)드릴은 절삭유 홀을 11자 타입으로 설계변경하여 드릴바디의 강성이 향상되고, 칩 배출 공간을 대폭 확장 시켰습니다.
- 최적의 설계로 절삭성능이 뛰어나고, 표면조도가 매우 우수합니다.

● The characteristic of HSD-V small drill

- Small dia drills are designed oil holes to 11 types so the hardness of the drill body is improved and the space of chip break is greately extended.
- The drilling performance and the surface roughness are excellent by the best design.

- 넓어진 칩 배출 공간 The widen chip discharging space





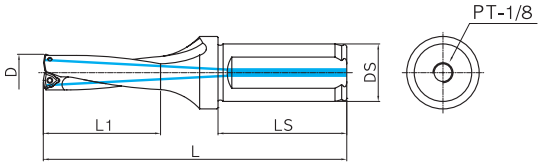
● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V20520D S25	20.5	44	125	25	56	WCMX040204	TSB-25055	TXL-8
HSD-V21020D S25	21.0	45	126					
HSD-V21520D S25	21.5	46	127					
HSD-V22020D S25	22.0	47	128					
HSD-V22520D S25	22.5	48	129					
HSD-V23020D S25	23.0	49	130					
HSD-V23520D S25	23.5	50	131					
HSD-V24020D S25	24.0	51	132					
HSD-V24520D S25	24.5	52	133					
HSD-V25020D S25	25.0	53	134					
HSD-V25520D S32	25.5	54	144	32	60	WCMX050308	TSB-30070	
HSD-V26020D S32	26.0	55	145					
HSD-V26520D S32	26.5	56	146					
HSD-V27020D S32	27.0	57	147					
HSD-V27520D S32	27.5	58	148					
HSD-V28020D S32	28.0	59	149					
HSD-V28520D S32	28.5	60	150					
HSD-V29020D S32	29.0	61	151					
HSD-V29520D S32	29.5	62	152					
HSD-V30020D S32	30.0	63	153					
HSD-V31020D S32	31.0	65	155			WCMX06T308	TSB-35090	TXL-15
HSD-V32020D S32	32.0	67	157					
HSD-V33020D S32	33.0	69	159					
HSD-V34020D S32	34.0	71	161					
HSD-V35020D S32	35.0	73	163					
HSD-V36020D S32	36.0	75	165					
HSD-V37020D S32	37.0	77	167					
HSD-V38020D S32	38.0	79	169					
HSD-V39020D S32	39.0	81	171					
HSD-V40020D S32	40.0	83	173					
HSD-V41020D S32	41.0	85	175					
HSD-V42020D S40	42.0	87	192	40	70	WCMX080408	TSB-40110	
HSD-V43020D S40	43.0	89	194					
HSD-V44020D S40	44.0	91	196					
HSD-V45020D S40	45.0	93	198					
HSD-V46020D S40	46.0	95	200					
HSD-V47020D S40	47.0	97	202					
HSD-V48020D S40	48.0	99	204					
HSD-V49020D S40	49.0	101	206					
HSD-V50020D S40	50.0	103	208					
HSD-V51020D S40	51.0	105	210					
HSD-V52020D S40	52.0	107	212					
HSD-V53020D S40	53.0	109	214					
HSD-V54020D S40	54.0	111	216					
HSD-V55020D S40	55.0	113	218					
HSD-V56020D S40	56.0	115	220					
HSD-V57020D S40	57.0	117	222					
HSD-V58020D S40	58.0	119	224					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
HSD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with HSD-V is Side Lock Arbor.(P.78~P.90)

HIGH SPEED DRILL
HSD-V 3×D



● Shank ISO9766, Parallel with clamping flat

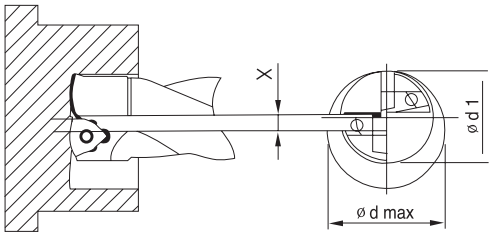
Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V13030D S20	13.0	42	112	20	50	WCMX03T104	TSB-18045	TXL-6
HSD-V13530D S20	13.5	44	114					
HSD-V14030D S20	14.0	45	115					
HSD-V14530D S20	14.5	47	117					
HSD-V15030D S20	15.0	48	118					
HSD-V15530D S25	15.5	50	120					
HSD-V16030D S25	16.0	51	132	25	56	WCMX030204	TSB-22045	
HSD-V16530D S25	16.5	53	134					
HSD-V17030D S25	17.0	54	135					
HSD-V17530D S25	17.5	56	137					
HSD-V18030D S25	18.0	57	138					
HSD-V18530D S25	18.5	59	140					
HSD-V19030D S25	19.0	60	141					
HSD-V19530D S25	19.5	62	143					
HSD-V20030D S25	20.0	63	144					

● HSD-V 중 · 대구경 드릴의 특징

- STD-V 중 · 대구경(ø20.5~ø80)드릴은 최적의 설계로 칩 배출 공간을 대폭 확장 시켰습니다.
  깊은 홀 가공에서도 드릴링이 안정되고, 표면조도가 우수합니다.
- 최적의 결과물을 위해, 절삭조건표(124페이지)와 절삭유 적정 압력을 확인해 주세요.
  (절삭유 적정압력은, HSD-V 2×D,3×D일때 3kg/㎠이상, 4×D일때 4kg/㎠이상)

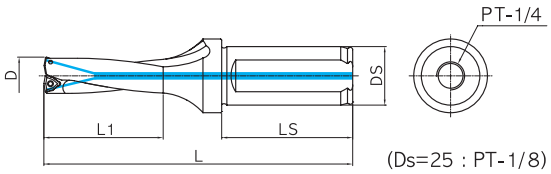
● The characteristic of HSD-V middle and big diameter drills

- The chip discharging space for HSD-V middle dia and big dia drill(ø20.5~ø80)was greately extended.
  These drills are stable and surface roughness are excellent in the deep hole drilling also.
- Please make sure the proper oil pressure and the cutting data(P.124)for the best performance.
  (The proper pressure for HSD-V 2×D,3×D is over 3kg/㎠, the proper pressure for 4×D is over 4kg/㎠)



max. D = D + 2 × Adjustment

By offsetting a non-rotating drill in the direction of the outside cutting edge, holes lager than the tool's nominal diameter can be produced



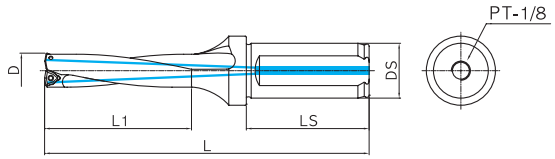
● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V20530D S25	20.5	65	146	25	56	WCMX040204	TSB-25055	TXL-8
HSD-V21030D S25	21.0	66	147					
HSD-V21530D S25	21.5	68	149					
HSD-V22030D S25	22.0	69	150					
HSD-V22530D S25	22.5	71	152					
HSD-V23030D S25	23.0	72	153					
HSD-V23530D S25	23.5	74	155					
HSD-V24030D S25	24.0	75	156					
HSD-V24530D S25	24.5	77	158					
HSD-V25030D S25	25.0	78	159					
HSD-V25530D S32	25.5	80	170	32	60	WCMX050308	TSB-30070	
HSD-V26030D S32	26.0	81	171					
HSD-V26530D S32	26.5	83	173					
HSD-V27030D S32	27.0	84	174					
HSD-V27530D S32	27.5	86	176					
HSD-V28030D S32	28.0	87	177					
HSD-V28530D S32	28.5	89	179					
HSD-V29030D S32	29.0	90	180					
HSD-V29530D S32	29.5	92	182					
HSD-V30030D S32	30.0	93	183					
HSD-V31030D S32	31.0	96	186			WCMX06T308	TSB-35090	TXL-15
HSD-V32030D S32	32.0	99	189					
HSD-V33030D S32	33.0	102	192					
HSD-V34030D S32	34.0	105	195					
HSD-V35030D S32	35.0	108	198					
HSD-V36030D S32	36.0	111	201					
HSD-V37030D S32	37.0	114	204					
HSD-V38030D S32	38.0	117	207					
HSD-V39030D S32	39.0	120	210					
HSD-V40030D S32	40.0	123	213					
HSD-V41030D S32	41.0	126	216					
HSD-V42030D S40	42.0	129	234	40	70	WCMX080408	TSB-40110	
HSD-V43030D S40	43.0	132	237					
HSD-V44030D S40	44.0	135	240					
HSD-V45030D S40	45.0	138	243					
HSD-V46030D S40	46.0	141	246					
HSD-V47030D S40	47.0	144	249					
HSD-V48030D S40	48.0	147	252					
HSD-V49030D S40	49.0	150	255					
HSD-V50030D S40	50.0	153	258					
HSD-V51030D S40	51.0	156	261					
HSD-V52030D S40	52.0	159	264					
HSD-V53030D S40	53.0	162	267					
HSD-V54030D S40	54.0	165	270					
HSD-V55030D S40	55.0	168	273					
HSD-V56030D S40	56.0	171	276					
HSD-V57030D S40	57.0	174	279					
HSD-V58030D S40	58.0	177	282					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
HSD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with HSD-V is Side Lock Arbor.(P.78~P.90)

HIGH SPEED DRILL
HSD-V 4×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V13040D S20	13.0	55	125	20	50	WCMX03T104	TSB-18045	TXL-6
HSD-V13540D S20	13.5	57	127					
HSD-V14040D S20	14.0	59	129					
HSD-V14540D S20	14.5	61	131					
HSD-V15040D S20	15.0	63	133					
HSD-V15540D S25	15.5	65	135					
HSD-V16040D S25	16.0	67	148	25	56	WCMX030204	TSB-22045	
HSD-V16540D S25	16.5	69	150					
HSD-V17040D S25	17.0	71	152					
HSD-V17540D S25	17.5	73	154					
HSD-V18040D S25	18.0	75	156					
HSD-V18540D S25	18.5	77	158					
HSD-V19040D S25	19.0	79	160					
HSD-V19540D S25	19.5	81	162					
HSD-V20040D S25	20.0	83	164					

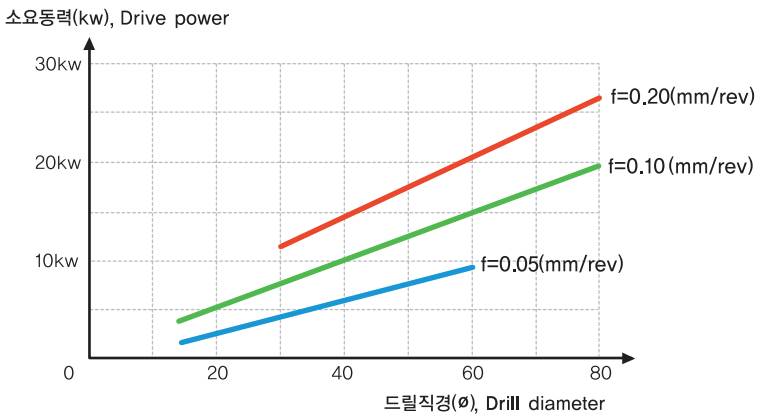
※ 최고의 결과물을 위해서는 절삭조건표(124페이지)와 절삭유 적정 압력을 확인해 주세요.(절삭유 적정압력은 5kg/㎠ 이상입니다.)
※ Please make sure the proper oil pressure and the cutting date(P.124)for the best performance.(The proper pressure is over 5kg/㎠)

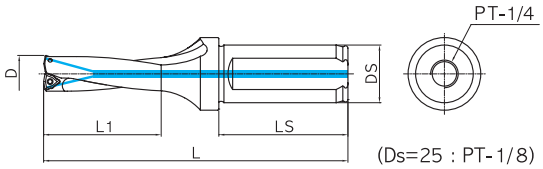
● HSD-V 드릴 구멍공차 The hole tolerance of HSD-V drill

Diameter	2×D	3×D	4×D
ø13 ~ø21.5	-0.10 ~ +0.15	-0.10 ~ +0.15	-0.15 ~ +0.20
ø22 ~ø50	-0.10 ~ +0.15	-0.12 ~ +0.20	-0.15 ~ +0.25
ø50 ~ø80	-0.15 ~ +0.20	-0.15 ~ +0.25	-0.15 ~ +0.30

※ 홀 공차는 드릴의 길이, 피삭재, 장비, 가공조건 등에 따라 차이가 생길 수 있습니다.
※ The length of drill, kind of workpiece, machine stability, and cutting condition could affect the hole tolerance.

● 소요동력 Power Requirements





● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls		Screw	T-Driver
HSD-V20540D S25	20.5	85	166	25	56	WCMX040204	TSB-25055	TXL-8
HSD-V21040D S25	21.0	87	168					
HSD-V21540D S25	21.5	89	170					
HSD-V22040D S25	22.0	91	172					
HSD-V22540D S25	22.5	93	174					
HSD-V23040D S25	23.0	95	176					
HSD-V23540D S25	23.5	97	178					
HSD-V24040D S25	24.0	99	180					
HSD-V24540D S25	24.5	101	182					
HSD-V25040D S25	25.0	103	184					
HSD-V25540D S32	25.5	105	195	32	60	WCMX050308	TSB-30070	
HSD-V26040D S32	26.0	107	197					
HSD-V26540D S32	26.5	109	199					
HSD-V27040D S32	27.0	111	201					
HSD-V27540D S32	27.5	113	203					
HSD-V28040D S32	28.0	115	205					
HSD-V28540D S32	28.5	117	207					
HSD-V29040D S32	29.0	119	209					
HSD-V29540D S32	29.5	121	211					
HSD-V30040D S32	30.0	123	213					
HSD-V31040D S32	31.0	127	217			WCMX06T308	TSB-35090	TXL-15
HSD-V32040D S32	32.0	131	221					
HSD-V33040D S32	33.0	135	225					
HSD-V34040D S32	34.0	139	229					
HSD-V35040D S32	35.0	143	233					
HSD-V36040D S32	36.0	147	237					
HSD-V37040D S32	37.0	151	241					
HSD-V38040D S32	38.0	155	245					
HSD-V39040D S32	39.0	159	249					
HSD-V40040D S32	40.0	163	253					
HSD-V41040D S32	41.0	167	257					
HSD-V42040D S40	42.0	171	276	40	70	WCMX080408	TSB-40110	
HSD-V43040D S40	43.0	175	280					
HSD-V44040D S40	44.0	179	284					
HSD-V45040D S40	45.0	183	288					
HSD-V46040D S40	46.0	187	292					
HSD-V47040D S40	47.0	191	296					
HSD-V48040D S40	48.0	195	300					
HSD-V49040D S40	49.0	199	304					
HSD-V50040D S40	50.0	203	308					
HSD-V51040D S40	51.0	207	312					
HSD-V52040D S40	52.0	211	316					
HSD-V53040D S40	53.0	215	320					
HSD-V54040D S40	54.0	219	324					
HSD-V55040D S40	55.0	223	328					
HSD-V56040D S40	56.0	227	332					
HSD-V57040D S40	57.0	231	336					
HSD-V58040D S40	58.0	235	340					

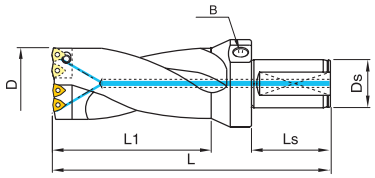
※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(VLT, FXD, VMD) 사용을 권장합니다.
HSD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with HSD-V is Side Lock Arbor.(P.78~P.90)

HIGH SPEED DRILL

HSD-V BIG DIAMETER DRILL(CARTRIDGE TYPE)

HSD-V 대구경 드릴(카트리지 타입)



● Shank ISO9766, Parallel with clamping flat

▶ STD-V 2×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
HSD-V596520D S40	59-65	130	240	40	70	WCMX06T308	TSB-35090	TXL-15	HSC-5965N/T
HSD-V657020D S40	65-70	140	250						HSC-6570N/T
HSD-V707520D S40	70-75	150	260						HSC-7075N/T
HSD-V758020D S40	75-80	160	270						HSC-7580N/T

▶ STD-V 3×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
HSD-V596530D S40	59-65	195	305	40	70	WCMX06T308	TSB-35090	TXL-15	HSC-5965N/T
HSD-V657030D S40	65-70	210	320						HSC-6570N/T
HSD-V707530D S40	70-75	225	335						HSC-7075N/T
HSD-V758030D S40	75-80	240	350						HSC-7580N/T

▶ STD-V 4×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
HSD-V596540D S40	59-65	260	370	40	70	WCMX06T308	TSB-35090	TXL-15	HSC-5965N/T
HSD-V657040D S40	65-70	280	390						HSC-6570N/T
HSD-V707540D S40	70-75	300	410						HSC-7075N/T
HSD-V758040D S40	75-80	320	430						HSC-7580N/T

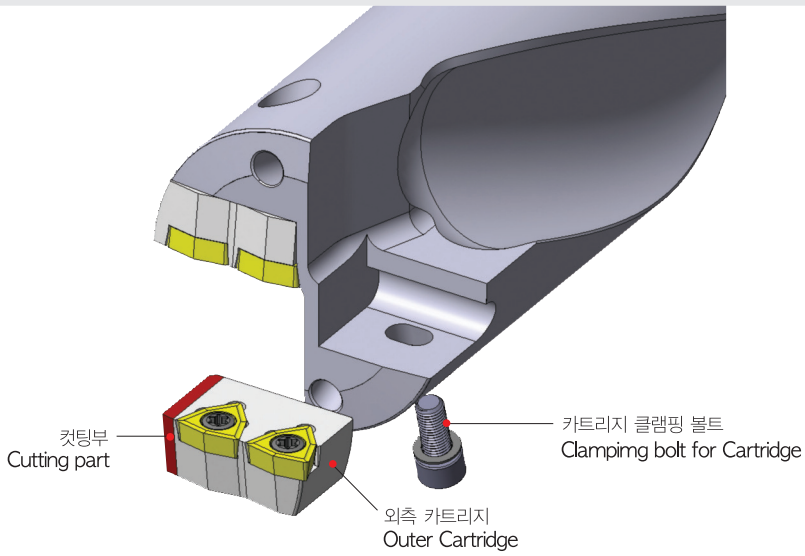
※ 범용선반 작업할 경우, 가공직경 ø40 이상이면 VLT나, VMD 사용을 권장합니다.
HSD-V드릴과 체결되는 툴 홀더는 '사이드락 아버'(78페이지~90페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the VLT, FXD, VMD
The tool holder that locks with HSD-V is Side Lock Arbor.(P.78~P.90)

• HSD-V 드릴 가공 동영상을 보시려면, 오른쪽 QR코드를 스캔하세요.
• Please scan the QR code if you want to see HSD-V drill testing sample video.

HSD-V VEDEO

HSD-V 대구경 드릴(카트리지 타입)셋팅 방법
THE SETTING PROCEDURES FOR THE BIG DIA DRILL(CARTRIDGE TYPE)



1) 외측카트리지를, 카트리지 클램핑 볼트를 풀어 바디에서 이탈시킨다.
   Loosen the clamping bolt of the outer cartridge and remove it from the drill body.

2) 외측카트리지의 측면 밀착부를, 가공하려는 직경을 계산하여 밀링작업을한다.
   Cut off the inside part, the comtacted side of the outer cartridge by milling after calculating the drilling diameter.

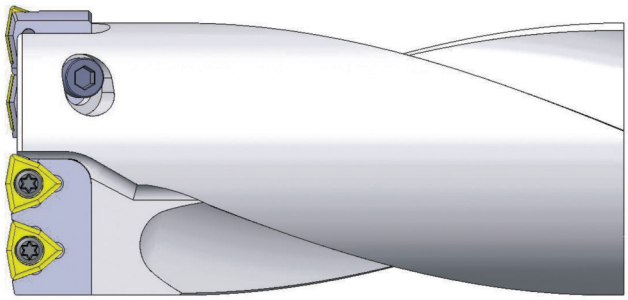
3) 컷팅된 외측카트리지의 날카로운 모서리면을 모따기 처리한다.
   Slick the sharp corner of the cut cartridge.

4) 외측카트리지를 틈이 발생되지 않도록 바디에 밀착시키면서 카트리지 클램핑 볼트로 단단히 고정한다.
   Adhere the cartridge closely to the drill body not happen gap and fix the cartridge with bolt tightly.

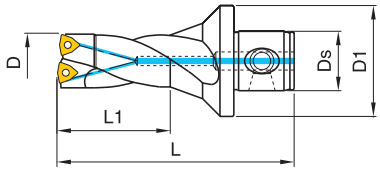
Example

HSD-V707530D를 ø72로 셋팅한다면,
기본 직경은 ø75이므로 ø75-ø72=3→3÷2=1.5(반지름으로 계산), 1.5mm를 컷팅한다.

If you set HSD-V707530D to ø72
The standard drill diameter is ø75 so ø75-ø72=3→3÷2=1.5(calculation by semidiameter), 1.5mm is cut off



HIGH SPEED DRILL
MCD 2×D

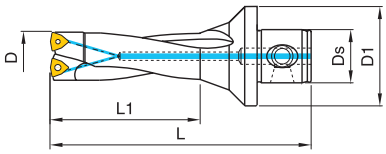


● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	D1	Ds		Screw	Driver
MCD-13020D	13	31	83	40	22	WCMX03T104	TSB-18045	TXL-6
MCD-14020D	14	33	85					
MCD-15020D	15	35	87					
MCD-16020D	16	37	89			WCMX030204	TSB-22045	
MCD-17020D	17	39	91					
MCD-18020D	18	41	93					
MCD-19020D	19	43	95					
MCD-20020D	20	45	97					
MCD-21020D	21	47	99			WCMX040204	TSB-25055	TXL-8
MCD-22020D	22	49	101					
MCD-23020D	23	51	103					
MCD-24020D	24	53	105					
MCD-25020D	25	55	107					
MCD-26020D	26	57	117	50	28	WCMX050308	TSB-30070	
MCD-27020D	27	59	119					
MCD-28020D	28	61	121					
MCD-29020D	29	63	123					
MCD-30020D	30	65	125					
MCD-31020D	31	67	127			WCMX06T308	TSB-35090	TXL-15
MCD-32020D	32	69	129					
MCD-33020D	33	71	131					
MCD-34020D	34	73	133					
MCD-35020D	35	75	135					
MCD-36020D	36	77	137					
MCD-37020D	37	79	139					
MCD-38020D	38	81	141					
MCD-39020D	39	83	143					
MCD-40020D	40	85	145					
MCD-41020D	41	87	147					
MCD-42020D	42	89	159	63	36	WCMX080408	TSB-40110	
MCD-43020D	43	91	161					
MCD-44020D	44	93	163					
MCD-45020D	45	95	165					
MCD-46020D	46	97	167					
MCD-47020D	47	99	169					
MCD-48020D	48	101	171					
MCD-49020D	49	103	173					
MCD-50020D	50	105	175					
MCD-51020D	51	107	177					
MCD-52020D	52	109	179					
MCD-53020D	53	111	181					
MCD-54020D	54	113	183					
MCD-55020D	55	115	185					
MCD-56020D	56	117	187					
MCD-57020D	57	119	189					
MCD-58020D	58	121	191					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(TMD, VMD) 사용을 권장합니다.
MCD드릴과 체결되는 툴 홀더는 'EXT 모듈러 툴홀더'(98페이지~102페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the TMD, VMD
The tool holder that locks with MCD is EXT Modular Tool holder.(P.98~P.102)



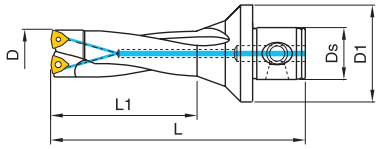
● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	D1	Ds		Screw	Driver
MCD-13025D	13	37	89	40	22	WCMX03T104	TSB-18045	TXL-6
MCD-14025D	14	40	92					
MCD-15025D	15	42	94					
MCD-16025D	16	45	97			WCMX030204	TSB-22045	
MCD-17025D	17	47	99					
MCD-18025D	18	50	102					
MCD-19025D	19	52	104					
MCD-20025D	20	55	107					
MCD-21025D	21	58	109			WCMX040204	TSB-25055	TXL-8
MCD-22025D	22	60	112					
MCD-23025D	23	63	115					
MCD-24025D	24	65	117					
MCD-25025D	25	68	119					
MCD-26025D	26	70	131	50	28	WCMX050308	TSB-30070	
MCD-27025D	27	73	133					
MCD-28025D	28	75	136					
MCD-29025D	29	78	138					
MCD-30025D	30	80	141					
MCD-31025D	31	83	143			WCMX06T308	TSB-35090	TXL-15
MCD-32025D	32	85	146					
MCD-33025D	33	88	148					
MCD-34025D	34	90	151					
MCD-35025D	35	93	153					
MCD-36025D	36	95	156					
MCD-37025D	37	98	158					
MCD-38025D	38	100	161					
MCD-39025D	39	103	163					
MCD-40025D	40	105	166					
MCD-41025D	41	108	168					
MCD-42025D	42	110	180	63	36	WCMX080408	TSB-40110	
MCD-43025D	43	113	183					
MCD-44025D	44	115	185					
MCD-45025D	45	118	188					
MCD-46025D	46	120	190					
MCD-47025D	47	123	193					
MCD-48025D	48	125	195					
MCD-49025D	49	128	198					
MCD-50025D	50	130	200					
MCD-51025D	51	133	203					
MCD-52025D	52	135	205					
MCD-53025D	53	138	208					
MCD-54025D	54	140	210					
MCD-55025D	55	143	213					
MCD-56025D	56	145	215					
MCD-57025D	57	148	218					
MCD-58025D	58	150	220					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(TMD, VMD) 사용을 권장합니다.
MCD드릴과 체결되는 툴 홀더는 'EXT 모듈러 툴홀더'(98페이지~102페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the TMD, VMD
The tool holder that locks with MCD is EXT Modular Tool holder.(P.98~P.102)

HIGH SPEED DRILL
MCD 3×D



● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component	
	D	L1	L	D1	Ds		Screw	Driver
MCD-13030D	13	44	96	40	22	WCMX03T104	TSB-18045	TXL-6
MCD-14030D	14	47	99					
MCD-15030D	15	50	102					
MCD-16030D	16	53	105			WCMX030204	TSB-22045	
MCD-17030D	17	56	108					
MCD-18030D	18	59	111					
MCD-19030D	19	62	114					
MCD-20030D	20	65	117					
MCD-21030D	21	68	120			WCMX040204	TSB-25055	TXL-8
MCD-22030D	22	71	123					
MCD-23030D	23	74	126					
MCD-24030D	24	77	129					
MCD-25030D	25	80	132					
MCD-26030D	26	83	144	50	28	WCMX050308	TSB-30070	
MCD-27030D	27	86	147					
MCD-28030D	28	89	150					
MCD-29030D	29	92	153					
MCD-30030D	30	95	156					
MCD-31030D	31	98	159			WCMX06T308	TSB-35090	TXL-15
MCD-32030D	32	101	162					
MCD-33030D	33	104	165					
MCD-34030D	34	107	168					
MCD-35030D	35	110	171					
MCD-36030D	36	113	174					
MCD-37030D	37	116	177					
MCD-38030D	38	119	180					
MCD-39030D	39	122	183					
MCD-40030D	40	125	186					
MCD-41030D	41	128	188					
MCD-42030D	42	131	201	63	36	WCMX080408	TSB-40110	
MCD-43030D	43	134	204					
MCD-44030D	44	137	207					
MCD-45030D	45	140	210					
MCD-46030D	46	143	213					
MCD-47030D	47	146	216					
MCD-48030D	48	149	219					
MCD-49030D	49	152	222					
MCD-50030D	50	155	225					
MCD-51030D	51	158	228					
MCD-52030D	52	161	231					
MCD-53030D	53	164	234					
MCD-54030D	54	167	237					
MCD-55030D	55	170	240					
MCD-56030D	56	173	243					
MCD-57030D	57	176	246					
MCD-58030D	58	179	249					

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(TMD, VMD) 사용을 권장합니다.
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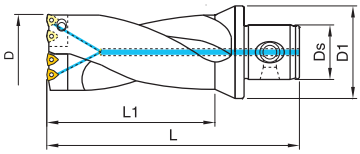
※ If you are working on the lathe, diameter ø40 or higher, we recommend using the TMD, VMD
The tool holder that locks with MCD is EXT Modular Tool holder.(P.98~P.102)



● EXT Modular Shank Type

▶ MCD 2×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
MCD-596525D	59-65	130	220	80	45	WCMX06T308	TSB-35090	TXL-15	HDC-5965N/T
MCD-657025D	65-70	140	230						MDC-080085N/T
MCD-707525D	70-75	150	240						MDC-085090N/T
MCD-758025D	75-80	160	250						MDC-090095N/T

▶ MCD 2.5×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
MCD-596525D	59-65	160	250	80	45	WCMX06T308	TSB-35090	TXL-15	HDC-5965N/T
MCD-657025D	65-70	175	265						MDC-080085N/T
MCD-707525D	70-75	190	280						MDC-085090N/T
MCD-758025D	75-80	200	290						MDC-090095N/T

▶ MCD 3×D (CARTRIDGE TYPE)

Code No.	치수 Dimension(mm)					인서트 Insert	부품 Component		카트리지 Cartridge
	D	L1	L	Ds	Ls		Screw	T-Driver	
MCD-596530D	59-65	195	285	80	45	WCMX06T308	TSB-35090	TXL-15	HDC-5965N/T
MCD-657030D	65-70	210	300						MDC-080085N/T
MCD-707530D	70-75	225	315						MDC-085090N/T
MCD-758030D	75-80	240	330						MDC-090095N/T

※ 가공경 ø40 이상을 범용선반에서 가공할 경우 센터붙이 타입 드릴(TMD, VMD) 사용을 권장합니다.
MCD드릴과 체결되는 툴 홀더는 'EXT 모듈러 툴홀더'(98페이지~102페이지)입니다.

※ If you are working on the lathe, diameter ø40 or higher, we recommend using the TMD, VMD
The tool holder that locks with MCD is EXT Modular Tool holder.(P.98~P.102)

Construction System of TURBO DRILL's Code No.

▶ Standard Type

FXD - 27540D S32

- FXD → 드릴종류 / Drill group
- 27 → 가공직경:Φ27.5 / Drilling diameter:Φ27.5
- 40D → 기공깊이:가공직경의 4배 / Drilling depth:Dia×4
- S32 → 생크직경 : Φ32 / Shank diameter:Φ32

▶ Adjustment Type

VLT - 758065D S40

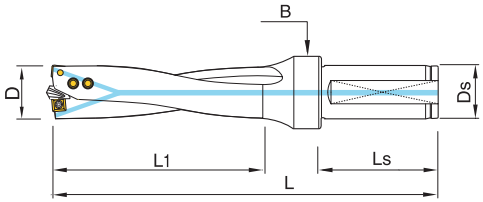
- VLT → 드릴종류 / Drill group
- 75 → 가공직경:Φ75~Φ80(조절타입) / Drilling diameter:Φ75~Φ80(Adjustable)
- 65D → 기공깊이:가공직경의 6.5배 / Drilling depth:Dia×6.5
- S40 → 생크직경 : Φ40 / Shank diameter:Φ40

Turbo Drill

FXD

TURBO DRILL

FXD 4×D

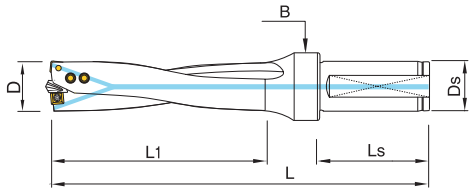


● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					B	인서트 Insert	Insert Screw	Torx Screw	센터드릴 Pilot Drill
	D	L1	L	Ds	Ls					
FXD-18040D S25	18.0	75	161	25	56	PT-1/8	SPMX 050204	TSB-20045	TXL-6	PLD-0620 TiN
FXD-18540D S25	18.5	77	163							
FXD-19040D S25	19.0	79	165							
FXD-19540D S25	19.5	81	167							
FXD-20040D S25	20.0	83	169				SPMX 060204	TSB-22052		
FXD-20540D S25	20.5	85	171							
FXD-21040D S25	21.0	87	173							
FXD-21540D S25	21.5	89	175							
FXD-22040D S25	22.0	91	177							
FXD-22540D S25	22.5	93	179							
FXD-23040D S25	23.0	95	181							
FXD-23540D S25	23.5	97	183							
FXD-24040D S25	24.0	99	185							
FXD-24540D S25	24.5	101	187							
FXD-25040D S25	25.0	103	189							
FXD-25540D S32	25.5	105	200	32	60	PT-1/4	SPMX 07T308	TSB-25065	TXL-8	PLD-0825 TiN
FXD-26040D S32	26.0	107	202							
FXD-26540D S32	26.5	109	204							
FXD-27040D S32	27.0	111	206							
FXD-27540D S32	27.5	113	208							
FXD-28040D S32	28.0	115	210							
FXD-28540D S32	28.5	117	212							
FXD-29040D S32	29.0	119	214							
FXD-29540D S32	29.5	121	216							
FXD-30040D S32	30.0	123	218							

※ FXD DRILL은 겹판가공이 가능합니다. 관통작업시 이송을 30~50%정도 줄여서 작업해주세요.
※ SPMX 인서트는 108페이지를 참조해주세요

※ FXD DRILL is capable of working laminated boards. Please reduce the feed rate by 30%~50% when performing penetration work.
※ Please refer to the page108 regarding SPMX insert.



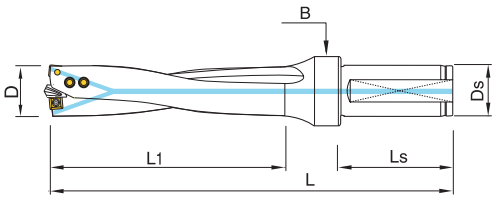
● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					B	인서트 Insert	Insert Screw	Torx Screw	센터드릴 Pilot Drill
	D	L1	L	Ds	Ls					
FXD-18060D S25	18.0	112	198	25	56	PT-1/8	SPMX 050204	TSB-20045	TXL-6	PLD-0620 TiN
FXD-18560D S25	18.5	115	201							
FXD-19060D S25	19.0	118	204							
FXD-19560D S25	19.5	121	207							
FXD-20060D S25	20.0	124	210				SPMX 060204	TSB-22052		
FXD-20560D S25	20.5	127	213							
FXD-21060D S25	21.0	130	216							
FXD-21560D S25	21.5	133	219							
FXD-22060D S25	22.0	136	222							
FXD-22560D S25	22.5	139	225							
FXD-23060D S25	23.0	142	228							
FXD-23560D S25	23.5	145	231							
FXD-24060D S25	24.0	148	234							
FXD-24560D S25	24.5	151	237							
FXD-25060D S25	25.0	154	240							
FXD-25560D S32	25.5	157	252	32	60	PT-1/4	SPMX 07T308	TSB-25065	TXL-8	PLD-0825 TiN
FXD-26060D S32	26.0	160	255							
FXD-26560D S32	26.5	163	258							
FXD-27060D S32	27.0	166	261							
FXD-27560D S32	27.5	169	264							
FXD-28060D S32	28.0	172	267							
FXD-28560D S32	28.5	175	270							
FXD-29060D S32	29.0	178	273							
FXD-29560D S32	29.5	181	276							
FXD-30060D S32	30.0	184	279							

※ FXD DRILL은 겹판가공이 가능합니다. 관통작업시 이송을 30~50%정도 줄여서 작업해주세요.
※ SPMX 인서트는 108페이지를 참조해주세요

※ FXD DRILL is capable of working laminated boards. Please reduce the feed rate by 30%~50% when performing penetration work.
※ Please refer to the page108 regarding SPMX insert.

TURBO DRILL
FXD 8×D



● Shank ISO9766, Parallel with clamping flat

Code No.	치수 Dimension(mm)					B	인서트 Insert	Insert Screw	Torx Screw	센터드릴 Pilot Drill
	D	L1	L	Ds	Ls					
FXD-18080D S25	18.0	149	235	25	56	PT-1/8	SPMX 050204	TSB-20045	TXL-6	PLD-0620 TiN
FXD-18580D S25	18.5	153	239							
FXD-19080D S25	19.0	157	243							
FXD-19580D S25	19.5	161	247							
FXD-20080D S25	20.0	165	251				SPMX 060204	TSB-22052		
FXD-20580D S25	20.5	169	255							
FXD-21080D S25	21.0	173	259							
FXD-21580D S25	21.5	177	263							
FXD-22080D S25	22.0	181	267							
FXD-22580D S25	22.5	185	271							
FXD-23080D S25	23.0	189	275							
FXD-23580D S25	23.5	193	279							
FXD-24080D S25	24.0	197	283							
FXD-24580D S25	24.5	201	287							
FXD-25080D S25	25.0	205	291							
FXD-25580D S32	25.5	209	304	32	60	PT-1/4	SPMX 07T308	TSB-25065	TXL-8	PLD-0825 TiN
FXD-26080D S32	26.0	213	308							
FXD-26580D S32	26.5	217	312							
FXD-27080D S32	27.0	221	316							
FXD-27580D S32	27.5	225	320							
FXD-28080D S32	28.0	229	324							
FXD-28580D S32	28.5	233	328							
FXD-29080D S32	29.0	237	332							
FXD-29580D S32	29.5	241	336							
FXD-30080D S32	30.0	245	340							

※ FXD DRILL은 겹판가공이 가능합니다. 관통작업시 이송을 30~50%정도 줄여서 작업해주세요.
※ SPMX 인서트는 108페이지를 참조해주세요

※ FXD DRILL is capable of working laminated boards. Please reduce the feed rate by 30%~50% when performing penetration work.
※ Please refer to the page108 regarding SPMX insert.

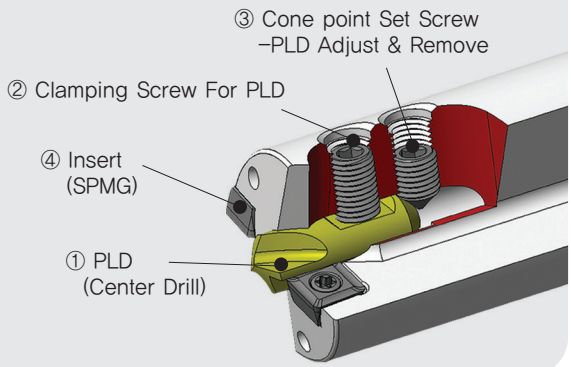
▣ 조립순서

1. ①PLD를 홀에 삽입한다.
2. ④인서트(2pcs.)를 체결한다.
3. ③번 스크류로 PLD높이를 조절한다.
4. ②번 스크류로 강하게 클램핑한다.
5. PLD와③번 스크류 사이에 유격이 발생하지 않도록 꽉 조여준다.

▣ How to set the clamping

1. The ①PLD insert to Hole..
2. Locking the ④Insert.(2pcs.)
3. The PLD Hight control as the ③Screw.
4. Clamping ②Screw tightiy
5. Do not make a space between PLD and ③Screw so you must be tight.

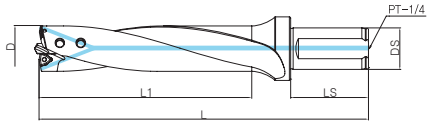
▣ FXD Setting View



Turbo Drill

VLT

TURBO DRILL
VLT 5×D

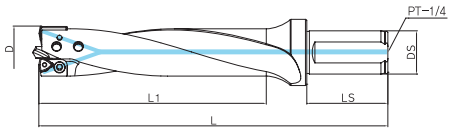


● Shank ISO9766, Parallel with clamping flat

▶ STANDARD TYPE

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls			Screw	Driver
VLT-25050D S32	25	150	240	32	60	PLD-V0630 TiN	WCMX030204	TSB-22045	TXL-6
VLT-26050D S32	26						WCMX040204	TSB-25055	TXL-8
VLT-27050D S32	27								
VLT-28050D S32	28								
VLT-29050D S32	29								
VLT-30050D S32	30								
VLT-31050D S32	31	175	265			PLD-V0835 TiN	WCMX0050308	TSB-30070	
VLT-32050D S32	32								
VLT-33050D S32	33								
VLT-34050D S32	34								
VLT-35050D S32	35								
VLT-36050D S32	36	200	290						
VLT-37050D S32	37								
VLT-38050D S32	38								
VLT-39050D S32	39								
VLT-40050D S32	40								

※ ø25~ø40 : 일반형 Standard Type



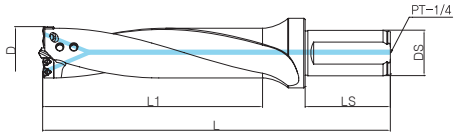
● Shank ISO9766, Parallel with clamping flat

▶ SINGLE INSERT CARTRIDGE TYPE

Shank	Ds	Ls
S40	40	70

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-414550D S40	41	225	330	PLD-V1035 TiN-H	WCMX 06T308	TSB-35078	TXL-15	VLC-410450N	VLC-000410T
	42								VLC-000420T
	43								VLC-000430T
	44								VLC-000440T
	45								VLC-000450T
VLT-465050D S40	46	250	355					VLC-460500N	VLC-000460T
	47								VLC-000470T
	48								VLC-000480T
	49								VLC-000490T
	50								VLC-000500T
VLT-515550D S40	51	275	380	PLD-V1238 TiN-H	WCMX 080408	TSB-40110		VLC-510550N	VLC-000510T
	52								VLC-000520T
	53								VLC-000530T
	54								VLC-000540T
	55								VLC-000550T
VLT-565950D S40	56	300	405					VLC-560590N	VLC-000560T
	57								VLC-000570T
	58								VLC-000580T
	59								VLC-000590T

※ ø41~ø59 : 1mm단위 개별 카트리지 사용으로 직경을 조절합니다.
※ ø41~ø59 : Adjustable 5mm unit when you replace individual outer cartridge(1mm)



● Shank ISO9766, Parallel with clamping flat

Shank	Ds	Ls
S40	40	70

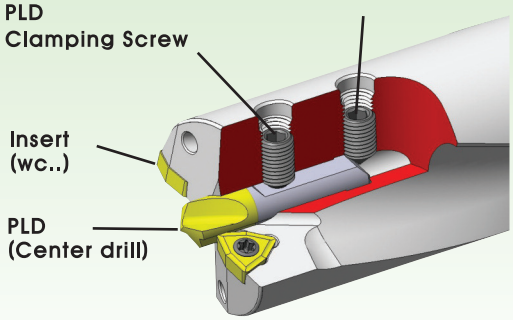
▶ DUAL INSERT CARTRIDGE TYPE

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-606550D S40	60~65	325	430	PLD-V1238 TiN-H	WCMX 050308	TSB-30070	TXL-8	VMC-060065N	VLC-060065T
VLT-657050D S40	65~70	350	455					VMC-065070N	VLC-065070T
VLT-707550D S40	70~75	375	480					VMC-070075N	VLC-070075T
VLT-758050D S40	75~80	400	505	PLD-V1645 TiN-H	WCMX 06T308	TSB-35090	TXL-15	VMC-075080N	VLC-075080T

※ ø60~ø80 : 외측 카트리지를 컷팅하여 직경을 조절합니다.
※ ø60~ø80 : Cut the outer cartridge and setting.(adjust 5mm)

• VLT 드릴 가공 동영상을 보시려면, 오른쪽 QR코드를 스캔하세요.
• Please scan the QR code if you want to see VLT drill testing sample video.

VLT VIDEO



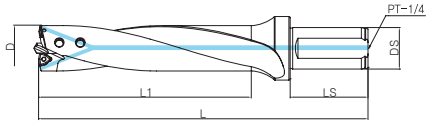
– Corn Point System –

▶ VLT A TYPE ø25mm~ø40mm(Standard Type)

▶ VLT B TYPE ø41mm~ø59mm(Single Insert Cartridge Type)

▶ VLT C TYPE ø60mm~ø80mm(Dual Insert Cartridge Type)

TURBO DRILL
VLT 6.5×D

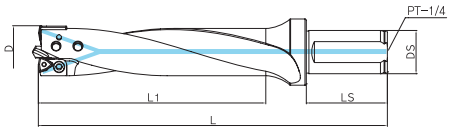


● Shank ISO9766, Parallel with clamping flat

▶ STANDARD TYPE

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls			Screw	Driver
VLT-250650D S32	25	185	275	32	60	PLD-V0630 TiN	WCMX030204	TSB-22045	TXL-6
VLT-260650D S32	26						WCMX040204	TSB-25055	TXL-8
VLT-270650D S32	27								
VLT-280650D S32	28								
VLT-290650D S32	29								
VLT-300650D S32	30								
VLT-310650D S32	31	218	308			PLD-V0835 TiN	WCMX050308	TSB-30070	
VLT-320650D S32	32								
VLT-330650D S32	33								
VLT-340650D S32	34								
VLT-350650D S32	35								
VLT-360650D S32	36	250	340						
VLT-370650D S32	37								
VLT-380650D S32	38								
VLT-390650D S32	39								
VLT-400650D S32	40								

※ ø25~ø40 : 일반형 Standard Type



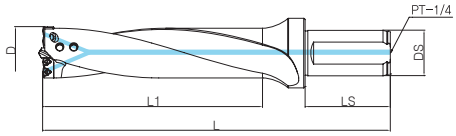
● Shank ISO9766, Parallel with clamping flat

▶ SINGLE INSERT CARTRIDGE TYPE

Shank	Ds	Ls
S40	40	70

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-4145650D S40	41	283	388	PLD-V1035 TiN-H	WCMX 06T308	TSB-35078	TXL-15	VLC-410450N	VLC-000410T
	42								VLC-000420T
	43								VLC-000430T
	44								VLC-000440T
	45								VLC-000450T
VLT-4650650D S40	46	315	420					VLC-460500N	VLC-000460T
	47								VLC-000470T
	48								VLC-000480T
	49								VLC-000490T
	50								VLC-000500T
VLT-5155650D S40	51	348	453	PLD-V1238 TiN-H	WCMX 080408	TSB-40110		VLC-510550N	VLC-000510T
	52								VLC-000520T
	53								VLC-000530T
	54								VLC-000540T
	55								VLC-000550T
VLT-5659650D S40	56	380	485					VLC-560590N	VLC-000560T
	57								VLC-000570T
	58								VLC-000580T
	59								VLC-000590T

※ ø41~ø59 : 1mm단위 개별 카트리지 사용으로 직경을 조절합니다.
※ ø41~ø59 : Adjustable 5mm unit when you replace individual outer cartridge(1mm)



● Shank ISO9766, Parallel with clamping flat

▶ DUAL INSERT CARTRIDGE TYPE

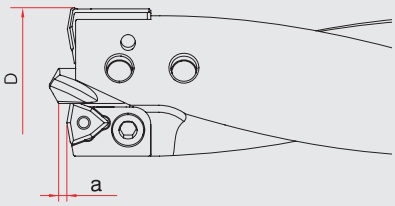
Shank	Ds	Ls
S40	40	70

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-6065650D S40	60~65	423	528	PLD-V1238 TiN-H	WCMX 050308	TSB-30070	TXL-8	VMC-060065N	VLC-060065T
VLT-6570650D S40	65~70	455	560					VMC-065070N	VLC-065070T
VLT-7075650D S40	70~75	488	593					VMC-070075N	VLC-070075T
VLT-7580650D S40	75~80	520	625	PLD-V1645 TiN-H	WCMX 06T308	TSB-35090	TXL-15	VMC-075080N	VLC-075080T

※ ø60~ø80 : 외측 카트리지를 컷팅하여 직경을 조절합니다.
※ ø60~ø80 : Cut the outer cartridge and setting.(adjust 5mm)

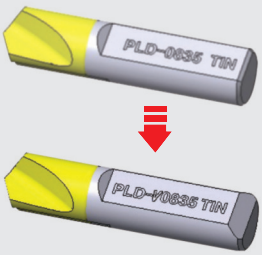
User Guide

▣ 파일럿드릴(PLD) 셋팅높이 Pilot drill(PLD) setting



Dill dia. (ø)	a		
	non-alloy steels	alloy steels	non-ferrous metal
25-30	1.2	1	1.5
31-40	1.5	1.3	1.8
41-50	1.8	1.5	2.2
51-59	2.2	1.8	2.5
60-75	2.5	2	2.8
75-80	3	2.5	3.5

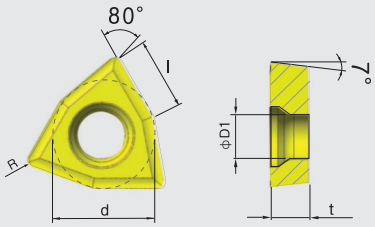
▣ 업그레이드 파일럿드릴(PLD) Upgrade PLD-V type



- 기존 PLD 적용 드릴 : TSD, TMD, VMD(MXD)
- Existing PLD-application drill : TSD, VMD(MXD)

- 업그레이드 PLD적용 드릴(호환성이 좋아짐) : TSD, TMD, VLT, VMD(MXD)
- Upgrade PLD-application drill : TSD, VMD(MXD) and VLT

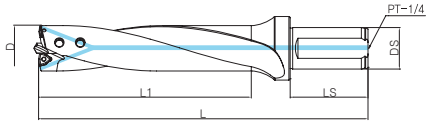
▣ VLT용 인서트 The insert for VLT-DRILL



Code No.	치수 Dimension(mm)				
	R	d	D1	t	l
WCMX030204	0.4	5.56	2.5	2.38	3.8
WCMX040204	0.4	6.35	2.8	2.38	4.3
WCMX050308	0.8	7.94	3.4	3.18	5.4
WCMX06T308	0.8	9.525	4.4	3.97	6.5
WCMX080408	0.8	12.7	5.5	4.76	8.7

- 위 규격과 다른 인서트를 사용하면 인서트 스크류가 인서트보다 튀어나오거나, 가공경이 작아질 수 있습니다.
- The standard table above is for the reference of inserts for VLT-DRILL, we also sell different designs of the insert screws seperately.

TURBO DRILL
VLT 8×D

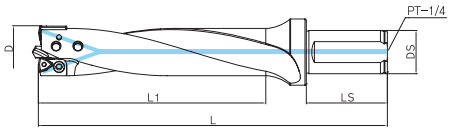


● Shank ISO9766, Parallel with clamping flat

▶ STANDARD TYPE

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	Ds	Ls			Screw	Driver
VLT-25080D S32	25	220	310	32	60	PLD-V0630 TiN	WCMX030204	TSB-22045	TXL-6
VLT-26080D S32	26						WCMX040204	TSB-25055	TXL-8
VLT-27080D S32	27								
VLT-28080D S32	28								
VLT-29080D S32	29								
VLT-30080D S32	30								
VLT-31080D S32	31	260	350			PLD-V0835 TiN	WCMX050308	TSB-30070	
VLT-32080D S32	32								
VLT-33080D S32	33								
VLT-34080D S32	34								
VLT-35080D S32	35								
VLT-36080D S32	36	300	390						
VLT-37080D S32	37								
VLT-38080D S32	38								
VLT-39080D S32	39								
VLT-40080D S32	40								

※ ø25~ø40 : 일반형 Standard Type



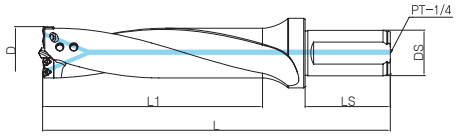
● Shank ISO9766, Parallel with clamping flat

▶ SINGLE INSERT CARTRIDGE TYPE

Shank	Ds	Ls
S40	40	70

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-414580D S40	41	340	445	PLD-V1035 TiN-H	WCMX 06T308	TSB-35078	TXL-15	VLC-410450N	VLC-000410T
	42								VLC-000420T
	43								VLC-000430T
	44								VLC-000440T
	45								VLC-000450T
VLT-465080D S40	46	380	485					VLC-460500N	VLC-000460T
	47								VLC-000470T
	48								VLC-000480T
	49								VLC-000490T
	50								VLC-000500T
VLT-515580D S40	51	420	525	PLD-V1238 TiN-H	WCMX 080408	TSB-40110		VLC-510550N	VLC-000510T
	52								VLC-000520T
	53								VLC-000530T
	54								VLC-000540T
	55								VLC-000550T
VLT-565980D S40	56	460	565					VLC-560590N	VLC-000560T
	57								VLC-000570T
	58								VLC-000580T
	59								VLC-000590T

※ ø41~ø59 : 1mm단위 개별 카트리지 사용으로 직경을 조절합니다.
※ ø41~ø59 : Adjustable 5mm unit when you replace individual outer cartridge(1mm)



● Shank ISO9766, Parallel with clamping flat

Shank	Ds	Ls
S40	40	70

▶ DUAL INSERT CARTRIDGE TYPE

Code No.	치수 Dimension(mm)			센터드릴 Pilot Drill	인서트 Insert	부품 Component		카트리지 Cartridge	
	D	L1	L			Screw	Driver	Inner	Outer
VLT-606580D S40	60~65	520	625	PLD-V1238 TiN-H	WCMX 050308	TSB-30070	TXL-8	VMC-060065N	VLC-060065T
VLT-657080D S40	65~70	560	665					VMC-065070N	VLC-065070T
VLT-707580D S40	70~75	600	705					VMC-070075N	VLC-070075T
VLT-758080D S40	75~80	640	745	PLD-V1645 TiN-H	WCMX 06T308	TSB-35090	TXL-15	VMC-075080N	VLC-075080T

※ ø60~ø80 : 외측 카트리지를 컷팅하여 직경을 조절합니다.
※ ø60~ø80 : Cut the outer cartridge and setting.(adjust 5mm)

Corn Point System

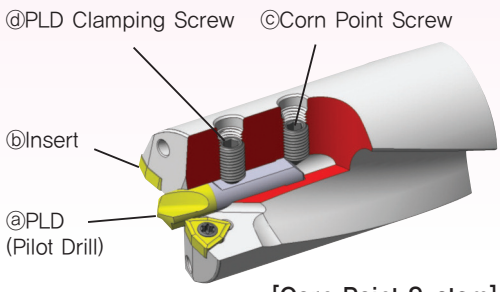
Anti-Vibration! Anti-Loose!

▣ 콘포인트 시스템 특징

(1) PLD높이를 빠르고 쉽게 조절할 수 있다
(2) PLD를 빼 내야 할 경우, 콘포인트볼트를 이용해 쉽게 제거할 수 있다.
(3) 가공시 진동발생이 발생해도 볼트가 풀림지 않아 PLD가 뒤로 밀리는 현상이 없다.

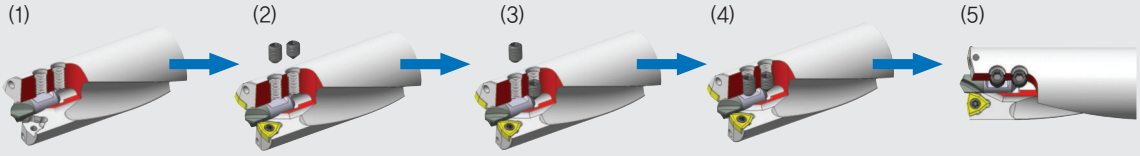
▣ Corn Point System Characteristic

(1) It is fast and easy to adjust hight, when you insert the PLD on the drill.
(2) The PLD is broken while you use, you can remove of the corn-point-screw.
(3) The corn-point-screw treat prevent of unloose when vibration occure, the PLD is not into the drill.



[Corn Point System]

▣ 조립순서(VLT,FXD) How to use (VLT, FXD)



(1)먼저 ⓐPLD를 삽입한다.
(2) 인서트 (또는 카트리지)를 클램핑한다.
(3) 콘포인트볼트로 PLD높이를 알맞게 맞춘다.
(4) PLD 클램핑볼트로 강하게 조여준다.
(5) 콘포인트 볼트로 다시한번 강하게 조여 유격을 없앤다.

(1) First, The ⓐPLD insert to Hole.
(2) Locking the ⓑInsert. (Cartridge+Insert)
(3) The ⓐPLD hight control as the ⓒcorn-point-screw
(4) ⓓPLD-Clamping-screw tightly.
(5) Clamping of ⓒCorn-point-screw tightly again.
(※Important!)

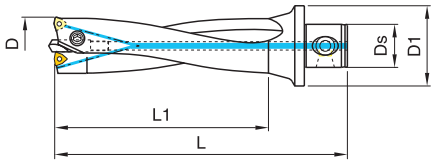
[Corn Point System]

Prevention from screw loose.

• The corn-point-screw treat prevent of unloose when vibration occure, the PLD is not in to the drill (It can be reused several times)

TURBO DRILL

TMD 5×D

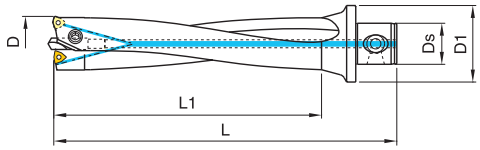


● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	D1	Ds			Screw	Driver
TMD-25050D	25	150	210	50	28	PLD-V0630 TiN	WCMX030204	TSB-22045	TXL-6
TMD-26050D	26						WCMX040204	TSB-25055	TXL-8
TMD-27050D	27								
TMD-28050D	28								
TMD-29050D	29								
TMD-30050D	30								
TMD-31050D	31	175	235			PLD-V0835 TiN	WCMX050308	TSB-30070	
TMD-32050D	32								
TMD-33050D	33								
TMD-34050D	34								
TMD-35050D	35								
TMD-36050D	36	200	260						
TMD-37050D	37								
TMD-38050D	38								
TMD-39050D	39								
TMD-40050D	40								
TMD-41050D	41	225	295	63	36	PLD-V1035 TiN-H	WCMX06T308	TSB-35090	TXL-15
TMD-42050D	42								
TMD-43050D	43								
TMD-44050D	44								
TMD-45050D	45								
TMD-46050D	46	250	320						
TMD-47050D	47								
TMD-48050D	48								
TMD-49050D	49								
TMD-50050D	50								
TMD-51050D	51	275	345			PLD-V1238 TiN-H	WCMX080408	TSB-40110	
TMD-52050D	52								
TMD-53050D	53								
TMD-54050D	54								
TMD-55050D	55								
TMD-56050D	56	300	370						
TMD-57050D	57								
TMD-58050D	58								
TMD-59050D	59								

※ TURBO DRILL은 일반 인써트 조립형 드릴의 한계인 직경의 5배 이상의 길이를 떨림없이 고속으로 드릴링 할 수 있으며 직경의 최대 8배까지 부드럽게 작업을 수행합니다.

※ Turbo Drill is capable of high speed drilling without vibrations for up to lengths 5 times greater than the diameter, which is the drilling threshold for general insert assembly drills. It is capable of providing smooth drilling work for up to size 8 times greater than the diameter.



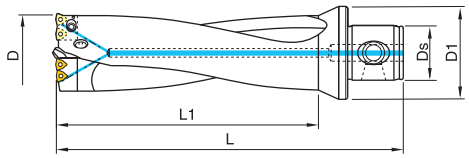
● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	D1	Ds			Screw	Driver
TMD-25080D	25	220	280	50	28	PLD-V0630 TiN	WCMX030204	TSB-22045	TXL-6
TMD-26080D	26						WCMX040204	TSB-25055	TXL-8
TMD-27080D	27								
TMD-28080D	28								
TMD-29080D	29								
TMD-30080D	30								
TMD-31080D	31	260	320			PLD-V0835 TiN	WCMX050308	TSB-30070	
TMD-32080D	32								
TMD-33080D	33								
TMD-34080D	34								
TMD-35080D	35								
TMD-36080D	36	300	360						
TMD-37080D	37								
TMD-38080D	38								
TMD-39080D	39								
TMD-40080D	40								
TMD-41080D	41	340	410	63	36	PLD-V1035 TiN-H	WCMX06T308	TSB-35090	TXL-15
TMD-42080D	42								
TMD-43080D	43								
TMD-44080D	44								
TMD-45080D	45								
TMD-46080D	46	380	450						
TMD-47080D	47								
TMD-48080D	48								
TMD-49080D	49								
TMD-50080D	50								
TMD-51080D	51	420	490			PLD-V1238 TiN-H	WCMX080408	TSB-40110	
TMD-52080D	52								
TMD-53080D	53								
TMD-54080D	54								
TMD-55080D	55								
TMD-56080D	56	460	530						
TMD-57080D	57								
TMD-58080D	58								
TMD-59080D	59								

※ TURBO DRILL은 일반 인써트 조립형 드릴의 한계인 직경의 5배 이상의 길이를 떨림없이 고속으로 드릴링 할 수 있으며 직경의 최대 8배까지 부드럽게 작업을 수행합니다.

※ Turbo Drill is capable of high speed drilling without vibrations for up to lengths 5 times greater than the diameter, which is the drilling threshold for general insert assembly drills. It is capable of providing smooth drilling work for up to size 8 times greater than the diameter.

TURBO DRILL
TMD CARTRIDGE TYPE



TMD 5×D CARTRIDGE TYPE

● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	D1	Ds			Screw	Driver
TMD-606550D	60~65	325	415	80	45	PLD-V1238 TiN-H	WCMX050308	TSB-30070	TXL-8
TMD-657050D	65~70	350	440						
TMD-707550D	70~75	375	465						
TMD-758050D	75~80	400	490			PLD-V1645 TiN-H	WCMX030204	TSB-22045	TXL-15

※ ø60~ø80은 카트리지 타입으로 5mm를 조정할 수 있으며 최대 칫수로 출고됩니다.
※ Cut the outer cartridge and setting. (adjust 5mm)
Please place an order for poilot drills separately when ordering.

TMD 8×D CARTRIDGE TYPE

● EXT Modular Shank Type

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	인서트 Insert	부품 Component	
	D	L1	L	D1	Ds			Screw	Driver
TMD-606580D	60~65	520	610	80	45	PLD-V1238 TiN-H	WCMX050308	TSB-30070	TXL-8
TMD-657080D	65~70	560	650						
TMD-707580D	70~75	600	690						
TMD-758080D	75~80	640	730			PLD-V1645 TiN-H	WCMX030204	TSB-22045	TXL-15

※ 카트리지, 파이롯트드릴은 110~115 페이지를 참조하세요.
※ Please refer to the page 110~115 regarding cartridges and poilot drill.

TURBO 드릴(VLT,VSD,TMD)의 특징
TURBO DRILL(VLT,VSD,TMD)CHARACTERISTIC

1) 가공직경의 5배이상의 길이를 떨림없이 고속으로 드릴링 할 수 있습니다.
Turbo drill is drilled the length over 5 times from the drill diamerter without shanking at high speed.

2) 가공직경의 최대 8배까지 부드럽게 작업할 수 있습니다.
This drill is drilled smoothiy yhe max lenght 8 times from drill diameter.

3) 특히, 선반에서의 대구경 가공시 떨림과 인서트 깨짐현상 없이 드릴링됩니다.
(선반에서 ø40이상 가공시엔 High Speed Drill보다는 Turbo Drill이나 Max Drill을 권장합니다.
Especially, the big diameter drilling done without insert broken at the lathe.
(When drilling over ø40at the lathe, we recommend Turbo Drill or Max Drill then High Speed Drill.)

VLT(VSD)1날 카트리지 타입 가공경 셋팅방법
THE DIAMETER SETTING PROCEDURES OF THE VLT(VSD)SINGLE INSERT CARTRIDGE TYPE

1) VLT 1날 카트리지 타입은 개별 카트리지(1mm 단위)로 공급됩니다.
VLT Single cartridge type is supplied it individual cartridge by 1mm unit.

2) 드릴 바디를 확인(셋팅 범위)하시고, 원하시는 외측 개별 카트리지를 바디에 장착하시면 간단히 셋팅 완료됩니다.
Make sure of the setting range of the drill body and adhere an outer cartridge to the drill body.

Example
VLT-465050D를 ø48로 셋팅한다면,
VLC-000480T(외측 카트리지)를 드릴 바디의 외측 카트리지부에 장착합니다.

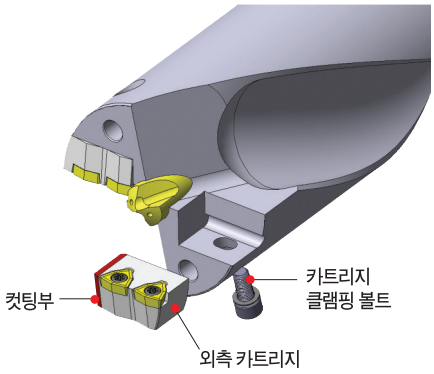
If setting VLT-465050D to ø48 seat
Adhere VLC-000480T(outer cartridge)to the outer cartridge putting place of the drill body.

VLT(VSD, VMD)2날 카트리지 타입 가공경 셋팅방법
THE DIAMETER SETTING PROCEDURES OF THE VLT(VSD, VMD)DUAL INSERT CARTRIDGE TYPE

1) 외측카트리지를 카트리지 클램핑 볼트를 풀어 바디에서 이탈 시킵니다.
Loosen the clamping bolt of the outer cartridge and remove it from the drill body

2) 외측카트리지의 측면 밀착부를 가공하려는 직경을 계산하여 밀링작업을합니다.
Cut off the inside part, the contacted side of the outer cartrodge by milling after calculating the drilling diameter

3) 컷팅된 외측카트리지의 날카로운 모서리면을 모따기 처리합니다.
Slick the sharp corner of the cut cartridge.



4) 외측카트리지를 틈이 발생되지 않도록 바디에 밀착시키면서 카트리지 클림핑 볼트로 단단히 고정합니다.
Adhere the cartridge closely to the drill body not happen gap and fix the cartridge with bolt tigftly.

Example
VLT-657080D를 ø66로 셋팅한다면,
기본직경은 ø70 이므로 ø70-ø66=4→4÷2=2(반지름으로 계산) 2mm컷팅합니다.

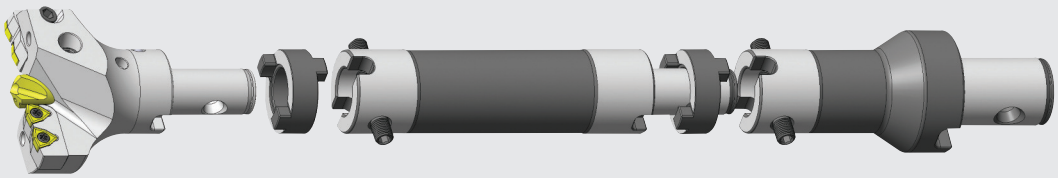
If setting VLT-657030D to ø66 seat
The standard drill diameter is ø70 so ø70-ø66=4→4÷2=2(calculation by semidiameter)
2mm is cut off.

Construction System of MAX DRILL's Code No.

▶ Adjustment Type

VMD - 125130

- VMD → 드릴종류 / Drill group
- 125130 → 가공직경:Φ125~Φ130(조절타입) / Drilling diameter:Φ125~Φ130(Adjustable)

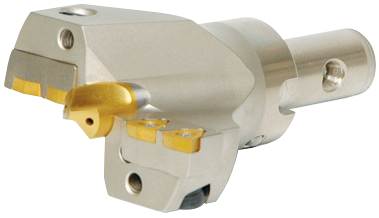


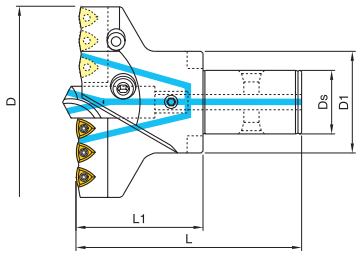
[MX MODULAR SYSTEM으로 체결강성이 뛰어납니다]

V-Max Drill

VMD

V-MAX DRILL
VMD





● MX Modular Shank Type

Code No.	치수 Dimension(mm)					센터드릴 Pilot Drill	카트리지 Cartridge	인서트 Insert	부품 Component	
	D	Ds	D1	L1	L				Screw	Driver
VMD-045050	45-50	13	28	50	85	PLD-V1035 TiN-H	VMC-045050N/T	WCMX030204	TSB-22045	TXL-6
VMD-050055	50-55	13	28	50	85		VMC-050055N/T			
VMD-055060	55-60	16	32	60	100	PLD-V1238 TiN-H	VMC-055060N/T	WCMX040204	TSB-25055	TXL-8
VMD-060065	60-65	16	32	60	100		VMC-060065N/T	WCMX050308	TSB-30070	
VMD-065070	65-70	16	32	60	100		VMC-065070N/T			
VMD-070075	70-75	22	40	70	115		VMC-070075N/T			
VMD-075080	75-80	22	40	70	115	PLD-V1645 TiN-H	VMC-075080N/T	WCMX06T308	TSB-35090	TXL-15
VMD-080085	80-85	22	40	70	115		VMC-080085N/T			
VMD-085090	85-90	27	48	70	120		VMC-085090N/T			
VMD-090095	90-95	27	48	70	120		VMC-090095N/T			
VMD-095100	95-100	27	48	70	120		VMC-095100N/T			
VMD-100105	100-105	32	58	80	130	PLD-V2045 TiN-H	VMC-100105N/T	WCMX050308	TSB-30070	TXL-8
VMD-105110	105-110	32	58	80	130		VMC-105110N/T	WCMX06T308	TSB-35090	TXL-15
VMD-110115	110-115	32	58	80	130		VMC-110115N/T			
VMD-115120	115-120	40	70	90	145		VMC-115120N/T			
VMD-120125	120-125	40	70	90	145	PLD-V2556 TiN-H	VMC-120125N/T			
VMD-125130	125-130	40	70	90	145		VMC-125130N/T			
VMD-130135	130-135	40	70	90	145		VMC-130135N/T			
VMD-135140	135-140	40	70	90	145		VMC-135140N/T			
VMD-140150	140-150	50	80	100	160		VMC-140150N/T	WCMX080408	TSB-40110	
VMD-150160	150-160	50	80	100	160		VMC-150160N/T			
VMD-160170	160-170	50	80	100	160	PLD-V3068 TiN-H	VMC-160170N/T			
VMD-170180	170-180	50	80	100	160		VMC-170180N/T			

※ 바디표면을 특수표면처리하여 내마모성 및 수명이 길어졌습니다.
※ MX Modular System으로 원하는 가공깊이 조절가능.
※ V-MAX 드릴 헤드는 최대직경으로 공급됩니다.
※ WCMX 인서트는 108페이지를 참조해주세요.

※ The drill body treated by forging was much solider and much stronger in impact.
※ The connecting strength by the MX modular system is excellent and the drilling depth is freely adjustable by connecting MXB, MXR and MXA.
※ Drill head is supplied with Max. diameter
※ Please refer to the page108 regarding WCMX insert.

• VMD 드릴 가공 동영상을 보시려면, 오른쪽 QR코드를 스캔하세요.
• Please scan the QR code if you want to see VMD drill testing sample video.

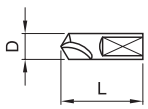
VMD VIDEO

CARTRIDGE

Drilling Range	Inner	Outer	인서트 Insert	No.of Insert	부품 Component	
					Screw	Driver
45-50	VMC-045050N	VMC-045050T	WCMX030204	2	TSB-22045	TXL-6
50-55	VMC-050055N	VMC-050055T				
55-60	VMC-055060N	VMC-055060T	WCMX040204	2	TSB-25055	TXL-8
60-65	VMC-060065N	VMC-060065T	WCMX050308	2	TSB-30070	
65-70	VMC-065070N	VMC-065070T				
70-75	VMC-070075N	VMC-070075T				
75-80	VMC-075080N	VMC-075080T	WCMX06T308	2	TSB-35090	TXL-15
80-85	VMC-080085N	VMC-080085T				
85-90	VMC-085090N	VMC-085090T				
90-95	VMC-090095N	VMC-090095T				
95-100	VMC-095100N	VMC-095100T				
100-105	VMC-100105N	VMC-100105T	WCMX050308	3	TSB-30070	TXL-8
105-110	VMC-105110N	VMC-105110T	WCMX06T308	3	TSB-35090	TXL-15
110-115	VMC-110115N	VMC-110115T				
115-120	VMC-115120N	VMC-115120T				
120-125	VMC-120125N	VMC-120125T				
125-130	VMC-125130N	VMC-125130T				
130-135	VMC-130135N	VMC-130135T				
135-140	VMC-135140N	VMC-135140T				
140-150	VMC-140150N	VMC-140150T	WCMX080408	3	TSB-40110	
150-160	VMC-150160N	VMC-150160T				
160-170	VMC-160170N	VMC-160170T				
170-180	VMC-170180N	VMC-170180T				

※ VMD 카트리지는 바디의 수명을 연장시키고 바깥쪽 카트리지 단면을 밀링 작업으로 직경을(5mm)조절할 수 있습니다.
※ Please place an order shorten the length of outer cartridge if smaller dia. is needed.(ex:ø77=by1.5mm cutting MDC-075080T)

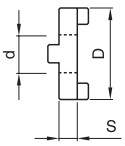
PILOT DRILL



Code No.	치수 Dimension(mm)	
	D	L
PLD-V1035 TiN-H	10	35
PLD-V1238 TiN-H	12	38
PLD-V1645 TiN-H	16	45
PLD-2045 TiN-H	20	
PLD-2556 TiN-H	25	56
PLD-3068 TiN-H	30	68

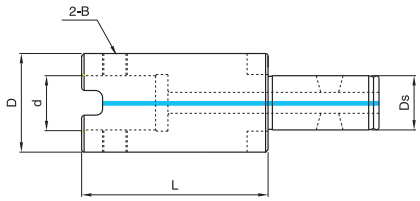
※ ex:PLD-2556 TiN-H(25TiN coated oil hole)

DRIVE RING



Code No.	치수 Dimension(mm)		
	D	d	S
DVR-281310	28	13	10
DVR-321610	32	16	
DVR-402212	40	22	12
DVR-482712	48	27	
DVR-583214	58	32	14
DVR-704014	70	40	
DVR-805016	80	50	16

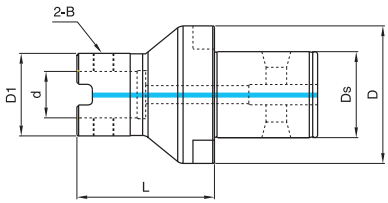
V-MAX DRILL
MXB / MXR



● MX Extension

▶ MXB

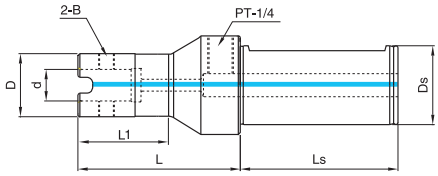
Code No.	치수 Dimension(mm)				B	Drive Ring
	D	d	L	Ds		
MXB-2813115	28	13	115	13	MTB-08115	DVR-281310
MXB-2813150			150			
MXB-2813200			200			
MXB-2813300			300			
MXB-3216115	32	16	115	16		DVR-321610
MXB-3216200			200			
MXB-3216300			300			
MXB-4022113	40	22	113	22	MTB-10145	DVR-402212
MXB-4022200			200			
MXB-4022300			300			
MXB-4827113	48	27	113	27	MTB-12175	DVR-482712
MXB-4827200			200			
MXB-4827300			300			
MXB-5832186	58	32	186	32	MTB-12195	DVR-583214
MXB-5832300			300			
MXB-7040186	70	40	186	40	MTB-16260	DVR-704014
MXB-7040300			300			
MXB-7040500			500			
MXB-8050204	80	50	204	50		DVR-805016
MXB-8050300			300			
MXB-8050500			500			



● MX Reducer

▶ MXR

Code No.	치수 Dimension(mm)					B	D1/Drive Ring	D/Drive Ring
	Ds	d	L	D	D1			
MXR-1613100	16	13	100	32	28	MTB-08115	DVR-281310	DVR-321610
MXR-2216100	22	16	100	40	32	MTB-08115	DVR-321610	DVR-402212
MXR-2722100	27	22	100	48	40	MTB-10145	DVR-402212	DVR-482712
MXR-3213100	32	13	100	58	28	MTB-08115	DVR-281310	DVR-583214
MXR-3216100	32	16	100	58	32	MTB-08115	DVR-321610	DVR-583214
MXR-3222100	32	22	100	58	40	MTB-10145	DVR-402212	DVR-583214
MXR-3227100	32	27	100	58	48	MTB-12175	DVR-482712	DVR-583214
MXR-4032100	40	32	100	70	58	MTB-12195	DVR-583214	DVR-704014
MXR-5013080	50	13	80	80	28	MTB-08115	DVR-281310	DVR-805016
MXR-5016080	50	16	80	80	32	MTB-08115	DVR-321610	DVR-805016
MXR-5022080	50	22	80	80	40	MTB-10145	DVR-402212	DVR-805016
MXR-5027080	50	27	80	80	48	MTB-12175	DVR-482712	DVR-805016
MXR-5032080	50	32	80	80	58	MTB-12195	DVR-583214	DVR-805016
MXR-5040150	50	40	150	80	70	MTB-16260	DVR-704014	DVR-805016

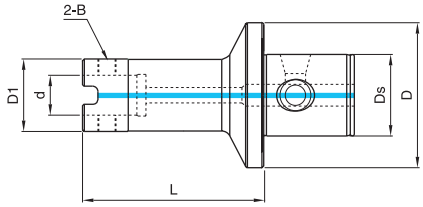


● MX + CYLINDRICAL Adaptor

▶ MXA

Code No.	치수 Dimension(mm)						B	Drive Ring
	Ds	d	L	L1	D	Ls		
MXA-3213115	32	13	115	77	28	70	MTB-08115	DVR-281310
MXA-3213200		13	200	165	28			
MXA-3213300		13	300	265	28			
MXA-4016125	40	16	125	86	32	80		DVR-321610
MXA-1016200		16	200	161	32			
MXA-4016300		16	300	261	32			
MXA-4022148		22	148	109	40		MTB-10145	DVR-402212
MXA-4022200		22	200	161	40			
MXA-4022300		22	300	261	40			
MXA-4027168		27	168	133	48		MTB-12175	DVR-482712
MXA-4027300		27	300	265	48			
MXA-4032186		32	186	151	58		MTB-12195	DVR-583214
MXA-4032300		32	300	265	58			
MXA-W5040186	50	40	186	151	70		MTB-16260	DVR-704014
MXA-W5040300		40	300	265	70			
MXA-W5050184		50	184	149	80			DVR-805016
MXA-W5050300		50	300	265	80			

※ MX모듈러 시스템을 사이드락 타입으로 변환시켜주는 어댑터입니다.
※ It is a Adaptor that converts the MX modular system to Side lock Type.



● MX + EXT Adaptor

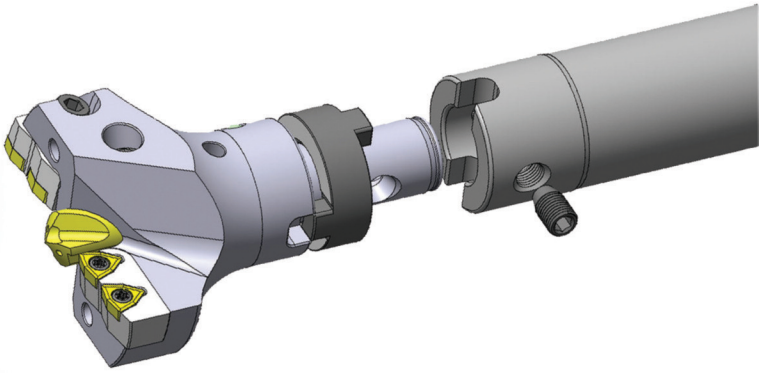
▶ MXE

Code No.	치수 Dimension(mm)					B	D1/Drive Ring
	Ds	d	L	D	D1		
MXE-3613100	36	13	100	63	28	MTB-08115	DVR-281310
MXE-3616100		16			32	MTB-08115	DVR-32160
MXE-3622100		22			40	MTB-10145	DVR-402212
MXE-3627100		27			48	MTB-12175	DVR-482712
MXE-3632100		32			58	MTB-12195	DVR-583214
MXE-4513100	45	13		80	28	MTB-08115	DVR-281310
MXE-4516100		16			32	MTB-08115	DVR-321610
MXE-4522100		22			40	MTB-10145	DVR-402212
MXE-4527100		27			48	MTB-12175	DVR-482712
MXE-4532100		32			58	MTB-12195	DVR-583214

※ MX모듈러 시스템을 EXT모듈러 시스템으로 변환시켜주는 어댑터입니다.
※ It is a Adaptor that converts the MX modular system to EXT modular system.

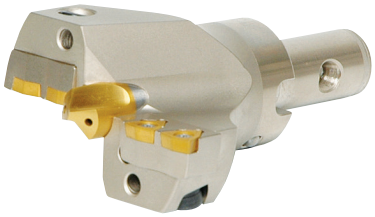
새로워진 V-MAX DRILL!
IMPROVED V-MAX DRILL!

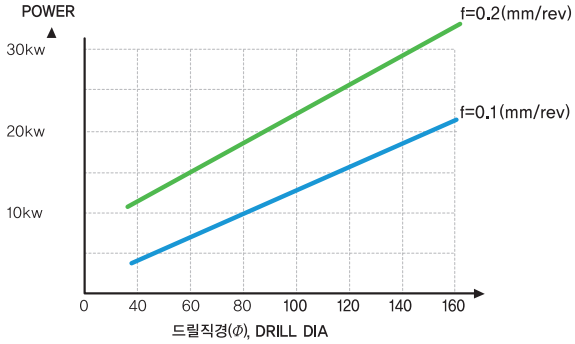
- 드릴바디를 단조처리하여 더욱 단단하고 충격에 강하다!
  The drill body treated by forging was much solider and much stronger in impact.
- 바디표면을 특수표면처리하여 내마모성 및 수명이 길어졌다!
  The especially treated surface of body make the inner-abrasion much better and the life make much longer
- 더욱 안정된 설계로 제작되어 MXD보다 드릴링이 안정되어 경제성이 뛰어나다!
  As this drill was designed more stably, this drill is steady of drilling and is good of economical efficiency.
- 가공직경 ø45~ø180이며, 가공깊이는 MX modular system으로 자유롭게 조절할 수 있다!
  Drilling diameters are from 45mm to 180mm and the drilling depth is freely adjustable by using the MX modular system
- 카트리지(VMC)타입으로 드릴바디의 수명을 연장시키고 가공직경을 조절할 수 있다!
  As this drill is cartridge(VMC)type, the drilling diameters are adjustable.
- 안정된 재고관리로 원하시는 제품을 신속히 사용할 수 있다!
  We can supply to customers promptiy by kepping stable stocks.



- MX 모듈러 시스템에 의한 체결방식으로 체결강성이 뛰어나며, 가공깊이를 MXB, MXR, MXA등으로 연결하여 가공깊이를 자유롭게 조절할 수 있습니다.
- The connecting strength by the MX modular system is excellent and the drilling depth is freely adjustable by connecting MXB, MXR and MXA.

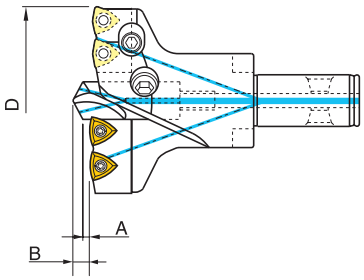
POWER REQUIRMENTS





MAX DRILL

파일럿 드릴(PLD)셋팅 높이 Pilot drill(PLD) setting



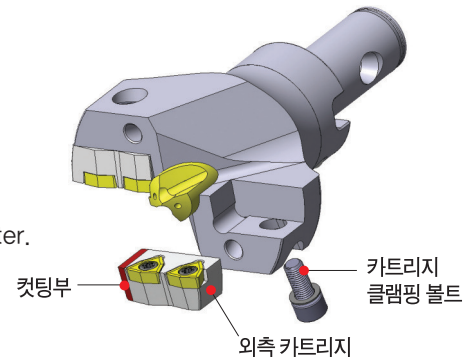
드릴경D	2~4×D		4~6×D		6~8×D	
	A	B	A	B	A	B
45–55	1.6	4.0	1.8	4.2	2.0	4.4
55–75	1.8	5.4	2.0	5.6	2.2	5.8
75–100	2.2	6.5	2.5	6.8	2.8	7.1
100–120	2.4	7.7	2.8	8.1	3.2	8.5
120–170	3.2	9.9	3.6	10.3	4.0	10.7
170–180	3.5	12.2	3.9	12.6	4.3	13.0

VMD(MXD)가공직경 조절방법 THE DIAMETER ADJUSTING PROCEDURES OF VMD(MXD)

1) 외측카트리지를 카트리지 클램핑 볼트를 풀어 바디에서 이탈 시킵니다.
Loosen the clamping bolt of the outer cartridge and remove it from the drill body.

2) 외측카트리지의 측면 밀착부를 가공하려는 직경을 계산하여 밀링작업을합니다.
Cut off the inside part, the contacted side of the outer cartrodge by milling after calculating the drilling diameter.

3) 컷팅된 외측카트리지의 날카로운 모서리면을 모따기 처리합니다.
Slick the sharp corner of the cut cartridge.



4) 외측카트리지를 틈이 발생되지 않도록 바디에 밀착시키면서 카트리지 클림핑 볼트로 단단히 고정합니다.
Adhere the cartridge closely to the drill body not happen gap and fix the cartridge with bolt tigftly.

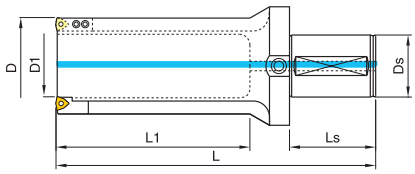
Example

VMD–135140를 ø136로 셋팅한다면,
기본직경은 ø140 이므로 ø140–ø136=4→4÷2=2(반지름으로 계산) 2mm컷팅합니다.

If setting VMD–135140 to ø136 seat
The standard drill diameter is ø140 so ø140–ø136=4→4÷2=2(calculation by semidiameter)
2mm is cut off.

TREPANNING DRILL

TPD 2.5×D



● TPD Cylindrical Shank Type

Code No.	치수 Dimension(mm)						카트리지 Cartridge	인서트 Insert	부품 Component	
	D	D1	L1	L	Ds	Ls			Screw	Driver
TPD-04025D	40	10	100	210	32	70	TDC-W0503N/T	WCMX050308	TSB-30070	TXL-8
TPD-04525D	45	15	100	210	40	80				
TPD-05025D	50	21	120	230						
TPD-05525D	55	26	120	230						
TPD-06025D	60	24.5	150	270			TDC-W06T3N/T	WCMX06T308	TSB-35090	TXL-15
TPD-06525D	65	30.5	150	270						
TPD-07025D	70	35.5	170	290						
TPD-07525D	75	40.5	170	290						
TPD-08025D	80	45.5	190	310						
TPD-08525D	85	50.5	190	330	50	100				
TPD-09025D	90	55	210	350						
TPD-09525D	95	60	210	350						
TPD-10025D	100	66	250	390						
TPD-11025D	110	76	250	390						

※ SPECIAL주문생산품
※ 트레판드릴은 적은 동력의 기계에서도 보다 효율적으로 드릴링 할 수 있습니다. 기본적으로 직경×2.5(가공길이)를 표준으로 권장하며 길이가 떨림이 적습니다. 보다 자세한 사항은 폐사로 문의 바랍니다.

※ SPECIAL ORDER PRODUCTS
※ Trepanning Drill is capable of efficient drilling even when using low power equipment. As a general rule, the processing length should be 2.5 times greater than the diameter, and the rate of vibration is lower as the length is shorter. Please contact our company for more detailed information.