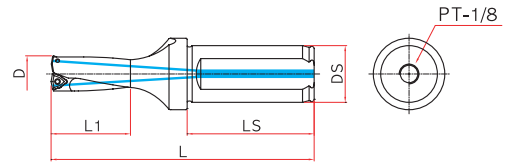


HIGH SPEED DRILL

HSD-V 2 × D

* 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



● 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	WC..03T104	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 S20	15.5	34	104					
HSD-V16020D S25	16.0	35	116	25	56	WC..030204	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					

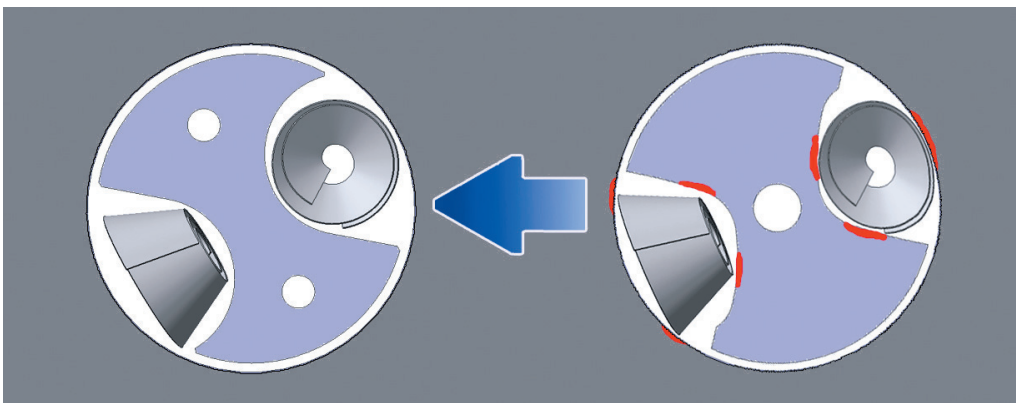
● The characteristic of HSD-V small drills

- * 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 greatly extended.
- * The drilling performance and the drilled surface are excellent by the best design.

● HSD-V 소구경 드릴의 특징

- * HSD-V 소구경($\phi 13 \sim \phi 20$) 드릴은 절삭유 흡을 11자 타입으로 설계변경하여 드릴바디의 강성이 향상되고, 칩 배출 공간이 대폭 확장 시켰습니다.
- * 최적의 설계로 절삭성능이 뛰어나고, 표면조도가 매우 우수합니다.

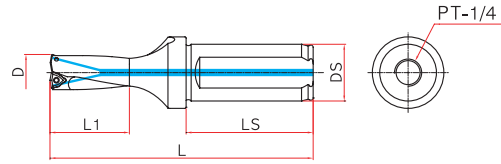
- * The widen chip discharging space 넓어진 칩 배출 공간



HIGH SPEED DRILL

HSD-V 2×D

※ 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



DRILL

● 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	WC..040204	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	WC..050308	TSB-30070	TXL-8
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					
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	WC..080408	TSB-40110	TXL-15
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					

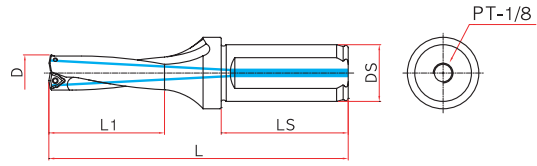
* HSD-V drill will be sold after HSD drill is sold out.

* HSD-V 드릴은, HSD 드릴 재고 소진 후 판매됩니다.

HIGH SPEED DRILL

HSD-V 3×D

* 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



● Shank ISO9766, Parallel with clamping flat

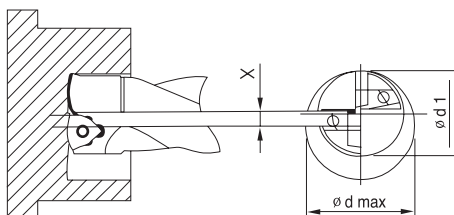
CODE NO.	치수, Dimension (mm)					인서트 INSERT	부품, Component	
	D	L1	L	DS	LS		SCREW	T-DRIVER
HSD-V13030D S20	13.0	42	112	20	50	WC..03T104	TSB-18045	TXL-6
HSD-V13530D S20	13.5	44	114					
HSD-V14030D S20	14.0	45	115					
HSD-V14530D S20	14.5	47	117					
HSD-V15030D S20	15.0	48	118					
HSD-V15530D S20	15.5	50	120					
HSD-V16030D S25	16.0	51	132	25	56	WC..030204	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					

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

- * The chip discharge space for HSD-V middle dia and big dia drill($\phi 22 \sim \phi 80$) was greatly extended. These drills are stable and drilling surface are excellent in the deep hole drilling also.
- * Please make sure the proper oil pressure and the cutting data(P.96) for the best performance. (The proper pressure for HSD-V2XD, 3XD is over 3kg/cm^2 , the proper pressure for 4XD is over 4kg/cm^2)

● HSD-V 중 · 대구경 드릴의 특징

- * HSD-V 중 · 대구경($\phi 20.5 \sim \phi 80$) 드릴은 최적의 설계로 칩 배출 공간을 대폭 확장 시켰습니다. 깊은 홀 가공에서도 드릴링이 안정되고, 표면조도가 우수합니다.
- * 최적의 결과물을 위해, 절삭조건표(P.96)와 절삭유 적정 압력을 확인해 주세요. (적정압력은, HSD-V 2XD, 3XD일때 3kg/cm^2 이상, 4XD일때, 4kg/cm^2 이상)



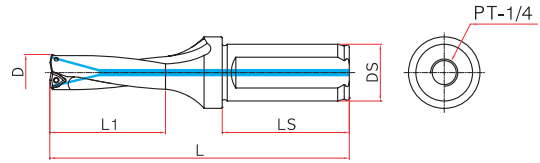
max. D = D + 2 x Adjustment

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

HIGH SPEED DRILL

HSD-V 3×D

※ 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



● 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	WC..040204	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	WC..050308	TSB-30070	TXL-8
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					
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	40	70	WC..06T308	TSB-35090	TXL-15
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					
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	40	70	WC..080408	TSB-40110	TXL-15
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					

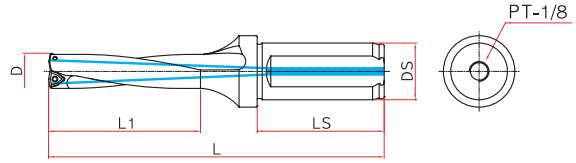
* HSD-V drill will be sold after STD drill is sold out.

* HSD-V 드릴은, HSD 드릴 재고 소진 후 판매됩니다.

HIGH SPEED DRILL

HSD-V 4 × D

※ 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



● Shank ISO9766, Parallel with clamping flat

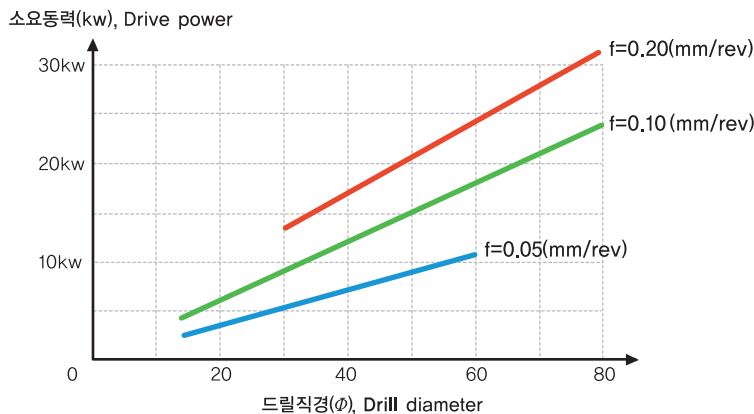
CODE NO.	치수, Dimension (mm)					인서트 INSERT	부품, Component	
	D	L1	L	DS	LS		SCREW	T-DRIVER
HSD-V13040D S20	13.0	55	125	20	50	WC..03T104	TSB-18045	TXL-6
HSD-V13540D S20	13.5	57	127					
HSD-V14040D S20	14.0	59	129					
HSD-V14540D S20	14.5	61	131					
HSD-V15040D S20	15.0	63	133					
HSD-V15540D S20	15.5	65	135	25	56	WC..030204	TSB-22045	
HSD-V16040D S25	16.0	67	148					
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					

※ THE HOLE TOLERANCE OF HSD-V DRILL HSD-V드릴 구멍공차

Dia	2XD	3XD	4XD
13~21.5	-0.1~+0.15	-0.1~+0.15	-0.15~+0.2
22~50	-0.1~+0.15	-0.12~+0.2	-0.15~+0.25
50~80	-0.15~+0.2	-0.15~+0.25	-0.15~+0.3

- * Need to make sure the best cutting data for the best performance.
- * Please make sure the cutting condition and oil pressure.
- * 최고의 결과물을 위해서는 최적의 절삭조건이 필요합니다.
- * 절삭조건표와 절삭유 압력 등을 꼭 확인해 주세요.

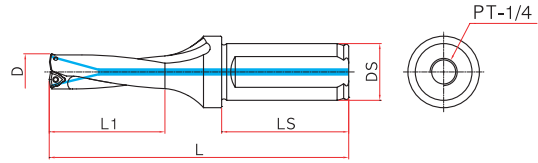
● Power Requirements 소요동력



HIGH SPEED DRILL

HSD-V 4×D

※ 범용선반 가공시, 가공직경 $\phi 40$ 이상은 TSD나, MXD 사용을 권장함.



DRILL

● 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	WC..040204	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	WC..050308	TSB-30070	TXL-8
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					
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	40	70	WC..080408	TSB-40110	TXL-15
HSD-V41040D S32	41.0	167	257					
HSD-V42040D S40	42.0	171	276					
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					

* HSD-V drill will be sold after HSD drill is sold out.

* HSD-V 드릴은, HSD 드릴 재고 소진 후 판매됩니다.