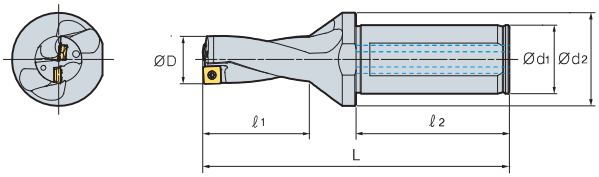
King Drill-2D

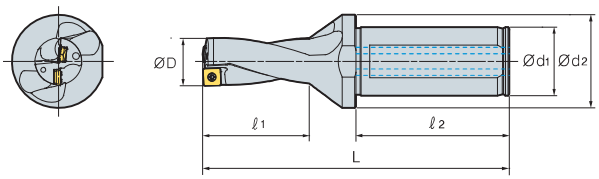


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K2D	12020-04	12.0	20	25	27	50	91	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	12520-04	12.5	20	25	27	50	91			
	13020-04	13.0	20	25	29	50	93			
	13520-04	13.5	20	25	29	50	93			
	14020-05	14.0	20	25	31	50	96	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	14520-05	14.5	20	25	31	50	96			
	15020-05	15.0	20	25	33	50	99			
	15520-05	15.5	20	25	33	50	99			
	16020-05	16.0	20	25	35	50	101			
	16525-06	16.5	25	34	35	56	107	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	17025-06	17.0	25	34	37	56	109			
	17525-06	17.5	25	34	37	56	109			
	18025-06	18.0	25	34	39	56	112			
	18525-06	18.5	25	34	39	56	112			
	19025-06	19.0	25	34	41	56	114			
	19525-06	19.5	25	34	41	56	114			
	20025-07	20.0	25	34	43	56	118	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	20525-07	20.5	25	34	43	56	118			
	21025-07	21.0	25	34	45	56	120			
	21525-07	21.5	25	34	45	56	120			
	22025-07	22.0	25	34	47	56	122			
	22525-07	22.5	25	34	47	56	122			
	23025-07	23.0	25	34	49	56	126			
	23525-07	23.5	25	34	49	56	126			
	24032-09	24.0	32	44	51	60	133	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	24532-09	24.5	32	44	51	60	133			
	25032-09	25.0	32	44	53	60	135			
	25532-09	25.5	32	44	53	60	135			
	26032-09	26.0	32	44	55	60	137			
	26532-09	26.5	32	44	55	60	137			
	27032-09	27.0	32	44	57	60	140			
	27532-09	27.5	32	44	57	60	140			
	28032-09	28.0	32	44	59	60	143			
	28532-09	28.5	32	44	59	60	143			
	29032-09	29.0	32	44	61	60	145			
	29532-09	29.5	32	44	61	60	145			
	30032-11	30.0	32	44	63	60	150	SP□T11T308-□□ XO□T11T306-□□	FTKA03508	TW15S
	30532-11	30.5	32	44	63	60	150			
	31032-11	31.0	32	44	65	60	152			
	31532-11	31.5	32	44	65	60	152			
	32032-11	32.0	32	44	67	60	154			
	32532-11	32.5	32	44	67	60	154			
	33032-11	33.0	32	44	69	60	157			
	33532-11	33.5	32	44	69	60	157			
	34032-11	34.0	32	44	71	60	159			
	34532-11	34.5	32	44	71	60	159			
	35032-11	35.0	32	44	73	60	161			
	35532-11	35.5	32	44	73	60	161			

Applicable inserts **G04~05**

King Drill-2D

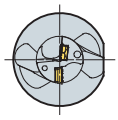


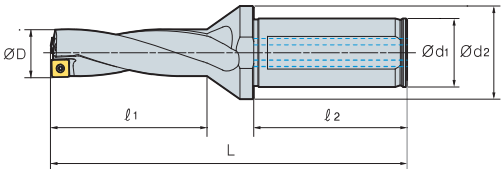
(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K2D	36040-13	36.0	40	48	76	70	176	SP□T130410-□□ XO□T130406-□□	FTKA0410	TW15S
	36540-13	36.5	40	48	76	70	176			
	37040-13	37.0	40	48	78	70	178			
	37540-13	37.5	40	48	78	70	178			
	38040-13	38.0	40	48	80	70	181			
	38540-13	38.5	40	48	80	70	181			
	39040-13	39.0	40	48	82	70	183			
	39540-13	39.5	40	48	82	70	183			
	40040-13	40.0	40	48	84	70	186			
	40540-13	40.5	40	48	84	70	186			
	41040-13	41.0	40	48	86	70	188			
	41540-13	41.5	40	48	86	70	188			
	42040-13	42.0	40	48	88	70	191			
	42540-13	42.5	40	48	88	70	191			
	43040-15	43.0	40	58	91	70	196	SP□T15M510-□□ XO□T15M508-□□	FTNC04511	TW20S
	43540-15	43.5	40	58	91	70	196			
	44040-15	44.0	40	58	93	70	198			
	44540-15	44.5	40	58	93	70	198			
	45040-15	45.0	40	58	95	70	201			
	45540-15	45.5	40	58	95	70	201			
	46040-15	46.0	40	58	97	70	203			
	46540-15	46.5	40	58	97	70	203			
	47040-15	47.0	40	58	99	70	206			
	47540-15	47.5	40	58	99	70	206			
	48040-15	48.0	40	58	101	70	208			
	48540-15	48.5	40	58	101	70	208			
	49040-15	49.0	40	58	103	70	210			
	49540-15	49.5	40	58	103	70	210			
	50040-15	50.0	40	58	105	70	212			
	50540-15	50.5	40	58	105	70	212			
	51040-18	51.0	40	68	108	70	218	SP□T180510-□□ XO□T180508-□□	FTNA0511	TW20-100
	51540-18	51.5	40	68	108	70	218			
	52040-18	52.0	40	68	110	70	220			
	52540-18	52.5	40	68	110	70	220			
	53040-18	53.0	40	68	112	70	222			
	53540-18	53.5	40	68	112	70	222			
	54040-18	54.0	40	68	114	70	224			
	54540-18	54.5	40	68	114	70	224			
	55040-18	55.0	40	68	116	70	226			
	55540-18	55.5	40	68	116	70	226			
	56040-18	56.0	40	68	118	70	230			
	56540-18	56.5	40	68	118	70	230			
	57040-18	57.0	40	68	121	70	233			
	57540-18	57.5	40	68	121	70	233			
	58040-18	58.0	40	68	124	70	236			
	58540-18	58.5	40	68	124	70	236			
	59040-18	59.0	40	68	127	70	239			
	59540-18	59.5	40	68	127	70	239			
	60040-18	60.0	40	68	130	70	242			
	60540-18	60.5	40	68	130	70	242			

Applicable inserts G04~05

King Drill-3D





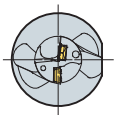
(mm)

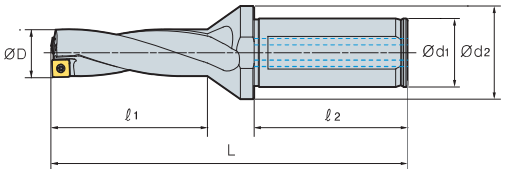
Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K3D	12020-04∗	12.0	20	25	39	50	103	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	12220-04	12.2	20	25	39	50	103			
	12520-04	12.5	20	25	39	50	103			
	12920-04	12.9	20	25	42	50	106			
	13020-04	13.0	20	25	42	50	106			
	13520-04	13.5	20	25	42	50	106			
	14020-05∗	14.0	20	25	45	50	110	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	14520-05	14.5	20	25	45	50	110			
	15020-05	15.0	20	25	48	50	114			
	15520-05∗	15.5	20	25	48	50	114			
	16020-05	16.0	20	25	51	50	117			
	16525-06	16.5	25	34	51	56	123	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	17025-06	17.0	25	34	54	56	126			
	17525-06∗	17.5	25	34	54	56	126			
	18025-06	18.0	25	34	57	56	130			
	18525-06	18.5	25	34	57	56	130			
	19025-06	19.0	25	34	60	56	133			
	19525-06∗	19.5	25	34	60	56	133			
	20025-07	20.0	25	34	63	56	138	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	20525-07	20.5	25	34	63	56	138			
	21025-07∗	21.0	25	34	66	56	141			
	21525-07	21.5	25	34	66	56	141			
	22025-07	22.0	25	34	69	56	144			
	22525-07	22.5	25	34	69	56	144			
	23025-07	23	25	34	72	56	149			
	23525-07	23.5	25	34	72	56	149			
	24032-09∗	24.0	32	44	75	60	157	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	24532-09	24.5	32	44	75	60	157			
	25032-09	25.0	32	44	78	60	160			
	25532-09	25.5	32	44	78	60	160			
	26032-09	26.0	32	44	81	60	163			
	26532-09∗	26.5	32	44	81	60	163			
	27032-09	27.0	32	44	84	60	167			
	27532-09	27.5	32	44	84	60	167			
	28032-09	28.0	32	44	87	60	171			
	28532-09	28.5	32	44	87	60	171			
	29032-09∗	29.0	32	44	90	60	174			
	29532-09	29.5	32	44	90	60	174			

Applicable inserts G04~05

The items marked ∗ can machinea tap foundation hole

King Drill-3D





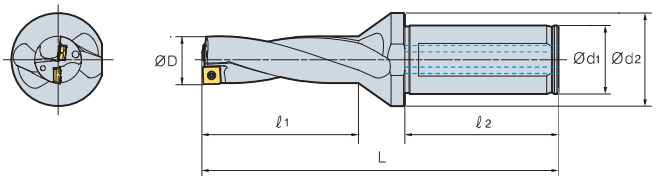
(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K3D	30032-11 *	30.0	32	44	93	60	180	SP□T11T308-□□ XO□T11T306-□□	FTKA03508	TW15S
	30532-11	30.5	32	44	93	60	180			
	31032-11	31.0	32	44	96	60	183			
	31532-11	31.5	32	44	96	60	183			
	32032-11	32.0	32	44	99	60	186			
	32532-11	32.5	32	44	99	60	186			
	33032-11	33.0	32	44	102	60	190			
	33532-11	33.5	32	44	102	60	190			
	34032-11	34.0	32	44	105	60	193			
	34532-11	34.5	32	44	105	60	193			
	35032-11 *	35.0	32	44	108	60	196			
	35532-11	35.5	32	44	108	60	196			
	36040-13	36.0	40	48	112	70	212	SP□T130410-□□ XO□T130406-□□	FTKA0410	TW15S
	36540-13	36.5	40	48	112	70	212			
	37040-13	37.0	40	48	115	70	215			
	37540-13	37.5	40	48	115	70	215			
	38040-13	38.0	40	48	118	70	219			
	38540-13	38.5	40	48	118	70	219			
	39040-13	39.0	40	48	121	70	222			
	39540-13	39.5	40	48	121	70	222			
	40040-13	40.0	40	48	124	70	226			
	40540-13	40.5	40	48	124	70	226			
	41040-13	41.0	40	48	127	70	229			
	41540-13	41.5	40	48	127	70	229			
	42040-13	42.0	40	48	130	70	233			
	42540-13	42.5	40	48	130	70	233			
	43040-15	43.0	40	58	134	70	239	SP□T15M510-□□ XO□T15M508-□□	FTNC04511	TW20S
	43540-15	43.5	40	58	134	70	239			
	44040-15	44.0	40	58	137	70	242			
	44540-15	44.5	40	58	137	70	242			
	45040-15	45.0	40	58	140	70	246			
	45540-15	45.5	40	58	140	70	246			
	46040-15	46.0	40	58	143	70	249			
	46540-15	46.5	40	58	143	70	249			
	47040-15	47.0	40	58	146	70	253			
	47540-15	47.5	40	58	146	70	253			
	48040-15	48.0	40	58	149	70	256			
	48540-15	48.5	40	58	149	70	256			
	49040-15	49.0	40	58	152	70	259			
	49540-15	49.5	40	58	152	70	259			
	50040-15	50.0	40	58	155	70	262			
	50540-15	50.5	40	58	155	70	262			

Applicable inserts G04~05

The items marked * can machinea tap foundation hole

King Drill-3D

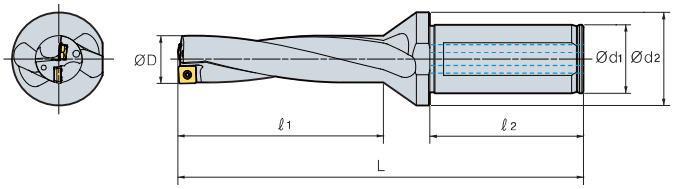


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K3D	51040-18	51.0	40	68	159	70	269	SP□T180510-□□ XO□T180508-□□	FTNA0511	TW20-100
	51540-18	51.5	40	68	159	70	269			
	52040-18	52.0	40	68	162	70	272			
	52540-18	52.5	40	68	162	70	272			
	53040-18	53.0	40	68	165	70	275			
	53540-18	53.5	40	68	165	70	275			
	54040-18	54.0	40	68	168	70	278			
	54540-18	54.5	40	68	168	70	278			
	55040-18	55.0	40	68	171	70	281			
	55540-18	55.5	40	68	171	70	281			
	56040-18	56.0	40	68	174	70	286			
	56540-18	56.5	40	68	174	70	286			
	57040-18	57.0	40	68	178	70	290			
	57540-18	57.5	40	68	178	70	290			
	58040-18	58.0	40	68	182	70	294			
	58540-18	58.5	40	68	182	70	294			
	59040-18	59.0	40	68	186	70	298			
	59540-18	59.5	40	68	186	70	298			
	60040-18	60.0	40	68	190	70	302			
	60540-18	60.5	40	68	190	70	302			

Applicable inserts **G04~05**

King Drill-4D

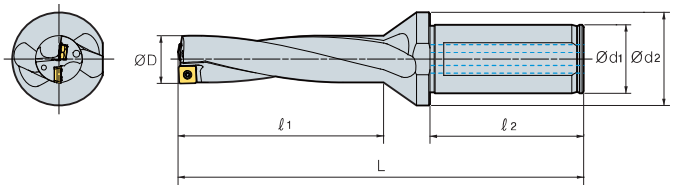


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K4D	12020-04	12.0	20	25	51	50	115	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	12520-04	12.5	20	25	51	50	115			
	13020-04	13.0	20	25	55	50	119			
	13520-04	13.5	20	25	55	50	119			
	14020-05	14.0	20	25	59	50	124	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	14520-05	14.5	20	25	59	50	124			
	15020-05	15.0	20	25	63	50	129			
	15520-05	15.5	20	25	63	50	129			
	16020-05	16.0	20	25	67	50	133			
	16525-06	16.5	25	34	67	56	139	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	17025-06	17.0	25	34	71	56	143			
	17525-06	17.5	25	34	71	56	143			
	18025-06	18.0	25	34	75	56	148			
	18525-06	18.5	25	34	75	56	148			
	19025-06	19.0	25	34	79	56	152			
	19525-06	19.5	25	34	79	56	152			
	20025-07	20.0	25	34	83	56	158	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	20525-07	20.5	25	34	83	56	158			
	21025-07	21.0	25	34	87	56	162			
	21525-07	21.5	25	34	87	56	162			
	22025-07	22.0	25	34	91	56	166			
	22525-07	22.5	25	34	91	56	166			
	23025-07	23.0	25	34	95	56	172			
	23525-07	23.5	25	34	95	56	172			
	24032-09	24.0	32	44	99	60	181	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	24532-09	24.5	32	44	99	60	181			
	25032-09	25.0	32	44	103	60	185			
	25532-09	25.5	32	44	103	60	185			
	26032-09	26.0	32	44	107	60	189			
	26532-09	26.5	32	44	107	60	189			
	27032-09	27.0	32	44	111	60	194			
	27532-09	27.5	32	44	111	60	194			
	28032-09	28.0	32	44	115	60	199			
	28532-09	28.5	32	44	115	60	199			
	29032-09	29.0	32	44	119	60	203			
	29532-09	29.5	32	44	119	60	203			
	30032-11	30.0	32	44	123	60	210	SP□T11T308-□□ XO□T11T306-□□	FTKA03508	TW15S
	30532-11	30.5	32	44	123	60	210			
	31032-11	31.0	32	44	127	60	214			
	31532-11	31.5	32	44	127	60	214			
	32032-11	32.0	32	44	131	60	218			
	32532-11	32.5	32	44	131	60	218			
	33032-11	33.0	32	44	135	60	223			
	33532-11	33.5	32	44	135	60	223			
	34032-11	34.0	32	44	139	60	227			
	34532-11	34.5	32	44	139	60	227			
	35032-11	35.0	32	44	143	60	231			
	35532-11	35.5	32	44	143	60	231			

Applicable inserts G04~05

King Drill-4D

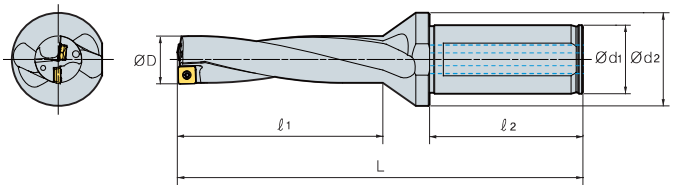


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K4D	36040-13	36.0	40	48	148	70	248	SP□T130410-□□ XO□T130406-□□	FTKA0410	TW15S
	36540-13	36.5	40	48	148	70	248			
	37040-13	37.0	40	48	152	70	252			
	37540-13	37.5	40	48	152	70	252			
	38040-13	38.0	40	48	156	70	257			
	38540-13	38.5	40	48	156	70	257			
	39040-13	39.0	40	48	160	70	261			
	39540-13	39.5	40	48	160	70	261			
	40040-13	40.0	40	48	164	70	266			
	40540-13	40.5	40	48	164	70	266			
	41040-13	41.0	40	48	168	70	270			
	41540-13	41.5	40	48	168	70	270			
	42040-13	42.0	40	48	172	70	275			
	42540-13	42.5	40	48	172	70	275			
	43040-15	43.0	40	58	177	70	282	SP□T15M510-□□ XO□T15M508-□□	FTNC04511	TW20S
	43540-15	43.5	40	58	177	70	282			
	44040-15	44.0	40	58	181	70	286			
	44540-15	44.5	40	58	181	70	286			
	45040-15	45.0	40	58	185	70	291			
	45540-15	45.5	40	58	185	70	291			
	46040-15	46.0	40	58	189	70	295			
	46540-15	46.5	40	58	189	70	295			
	47040-15	47.0	40	58	193	70	300			
	47540-15	47.5	40	58	193	70	300			
	48040-15	48.0	40	58	197	70	304			
	48540-15	48.5	40	58	197	70	304			
	49040-15	49.0	40	58	201	70	308			
	49540-15	49.5	40	58	201	70	308			
	50040-15	50.0	40	58	205	70	312			
	50540-15	50.5	40	58	205	70	312			
	51040-18	51.0	40	68	210	70	320	SP□T180510-□□ XO□T180508-□□	FTNA0511	TW20-100
	51540-18	51.5	40	68	210	70	320			
	52040-18	52.0	40	68	214	70	324			
	52540-18	52.5	40	68	214	70	324			
	53040-18	53.0	40	68	218	70	328			
	53540-18	53.5	40	68	218	70	328			
	54040-18	54.0	40	68	222	70	332			
	54540-18	54.5	40	68	222	70	332			
	55040-18	55.0	40	68	226	70	336			
	55540-18	55.5	40	68	226	70	336			
	56040-18	56.0	40	68	230	70	342			
	56540-18	56.5	40	68	230	70	342			
	57040-18	57.0	40	68	235	70	347			
	57540-18	57.5	40	68	235	70	347			
	58040-18	58.0	40	68	240	70	352			
	58540-18	58.5	40	68	240	70	352			
	59040-18	59.0	40	68	245	70	357			
	59540-18	59.5	40	68	245	70	357			
	60040-18	60.0	40	68	250	70	362			
	60540-18	60.5	40	68	250	70	362			

Applicable inserts G04~05

King Drill-5D

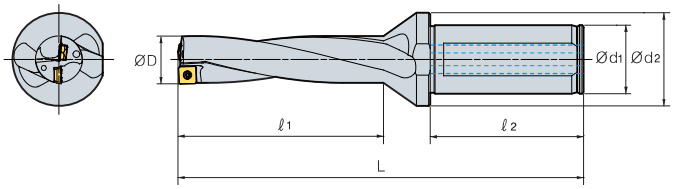


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K5D	12020-04	12.0	20	25	63	50	127	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	12520-04	12.5	20	25	63	50	127			
	13020-04	13.0	20	25	68	50	132			
	13520-04	13.5	20	25	68	50	132			
	14020-05	14.0	20	25	73	50	138	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	14520-05	14.5	20	25	73	50	138			
	15020-05	15.0	20	25	78	50	144			
	15520-05	15.5	20	25	78	50	144			
	16020-05	16.0	20	25	83	50	149			
	16525-06	16.5	25	34	83	56	155	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	17025-06	17.0	25	34	88	56	160			
	17525-06	17.5	25	34	88	56	160			
	18025-06	18.0	25	34	93	56	166			
	18525-06	18.5	25	34	93	56	166			
	19025-06	19.0	25	34	98	56	171			
	19525-06	19.5	25	34	98	56	171			
	20025-07	20.0	25	34	103	56	178	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	20525-07	20.5	25	34	103	56	178			
	21025-07	21.0	25	34	108	56	183			
	21525-07	21.5	25	34	108	56	183			
	22025-07	22.0	25	34	113	56	188			
	22525-07	22.5	25	34	113	56	188			
	23025-07	23.0	25	34	118	56	195			
	23525-07	23.5	25	34	118	56	195			
	24032-09	24.0	32	44	123	60	205	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	24532-09	24.5	32	44	123	60	205			
	25032-09	25.0	32	44	128	60	210			
	25532-09	25.5	32	44	128	60	210			
	26032-09	26.0	32	44	133	60	215			
	26532-09	26.5	32	44	133	60	215			
	27032-09	27.0	32	44	138	60	221			
	27532-09	27.5	32	44	138	60	221			
	28032-09	28.0	32	44	143	60	227			
	28532-09	28.5	32	44	143	60	227			
	29032-09	29.0	32	44	148	60	232			
	29532-09	29.5	32	44	148	60	232			
	30032-11	30.0	32	44	153	60	240	SP□T11T308-□□ XO□T11T306-□□	FTKA03508	TW15S
	30532-11	30.5	32	44	153	60	240			
	31032-11	31.0	32	44	158	60	245			
	31532-11	31.5	32	44	158	60	245			
	32032-11	32.0	32	44	163	60	250			
	32532-11	32.5	32	44	163	60	250			
	33032-11	33.0	32	44	168	60	256			
	33532-11	33.5	32	44	168	60	256			
	34032-11	34.0	32	44	173	60	261			
	34532-11	34.5	32	44	173	60	261			
	35032-11	35.0	32	44	178	60	266			
	35532-11	35.5	32	44	178	60	266			

Applicable inserts G04~05

King Drill-5D



(mm)

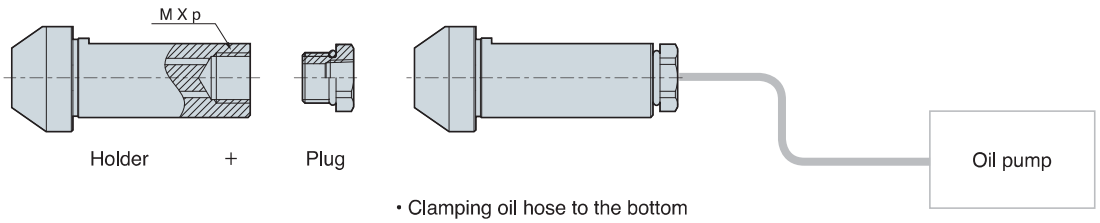
Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K5D	36040-13	36.0	40	48	184	70	284	SP□T130410-□□ XO□T130406-□□	FTKA0410	TW15S
	36540-13	36.5	40	48	184	70	284			
	37040-13	37.0	40	48	189	70	289			
	37540-13	37.5	40	48	189	70	289			
	38040-13	38.0	40	48	194	70	295			
	38540-13	38.5	40	48	194	70	295			
	39040-13	39.0	40	48	199	70	300			
	39540-13	39.5	40	48	199	70	300			
	40040-13	40.0	40	48	204	70	306			
	40540-13	40.5	40	48	204	70	306			
	41040-13	41.0	40	48	209	70	311			
	41540-13	41.5	40	48	209	70	311			
	42040-13	42.0	40	48	214	70	317			
	42540-13	42.5	40	48	214	70	317			
	43040-15	43.0	40	58	220	70	325	SP□T15M510-□□ XO□T15M508-□□	FTNC04511	TW20S
	43540-15	43.5	40	58	221	70	326			
	44040-15	44.0	40	58	225	70	330			
	44540-15	44.5	40	58	225	70	330			
	45040-15	45.0	40	58	230	70	336			
	45540-15	45.5	40	58	230	70	336			
	46040-15	46.0	40	58	235	70	341			
	46540-15	46.5	40	58	235	70	341			
	47040-15	47.0	40	58	240	70	347			
	47540-15	47.5	40	58	240	70	347			
	48040-15	48.0	40	58	245	70	352			
	48540-15	48.5	40	58	245	70	352			
	49040-15	49.0	40	58	250	70	357			
	49540-15	49.5	40	58	250	70	357			
	50040-15	50.0	40	58	255	70	362			
	50540-15	50.5	40	58	255	70	362			
	51040-18	51.0	40	68	261	70	371	SP□T180510-□□ XO□T180508-□□	FTNA0511	TW20-100
	51540-18	51.5	40	68	261	70	371			
	52040-18	52.0	40	68	266	70	376			
	52540-18	52.5	40	68	266	70	376			
	53040-18	53.0	40	68	271	70	381			
	53540-18	53.5	40	68	271	70	381			
	54040-18	54.0	40	68	276	70	386			
	54540-18	54.5	40	68	276	70	386			
	55040-18	55.0	40	68	281	70	391			
	55540-18	55.5	40	68	281	70	391			
	56040-18	56.0	40	68	286	70	398			
	56540-18	56.5	40	68	286	70	398			
	57040-18	57.0	40	68	292	70	404			
	57540-18	57.5	40	68	292	70	404			
	58040-18	58.0	40	68	298	70	410			
	58540-18	58.5	40	68	298	70	410			
	59040-18	59.0	40	68	304	70	416			
	59540-18	59.5	40	68	304	70	416			
	60040-18	60.0	40	68	310	70	422			
	60540-18	60.5	40	68	310	70	422			

Applicable inserts G04~05

Drill with through coolant system for general lathe and CNC lathe without through coolant system

King Drill (For through coolant system with a lathe)

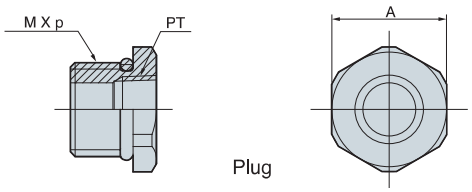
- Through coolant system with drill holder, plug, oil-hole hose and oil-hole pump
- PT TAP in the plug is combined to PT TAP connected to oil hose
- Available to use the drill without a plug in milling machine



• Clamping oil hose to the bottom of plug and connect the oil pump to the holder

(mm)

Tap type	Diameter	Shank dia.	M x p	Plug
K□D120~16020HP-□□	Ø12.0~Ø16.0	Ø20	M12x1.5	PLG12PT18
K□D161~23525HP-□□	Ø16.1~Ø23.5	Ø25	M16x1.5	PLG16PT18
K□D236~35532HP-□□	Ø23.6~Ø35.5	Ø32	M20x2.0	PLG20PT14
K□D356~60940HP-□□	Ø35.6~Ø60.5	Ø40	M27x2.0	PLG27PT38

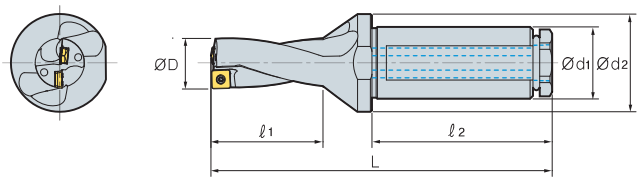


• Plug is assembled

Plug type	M x p	PT tap	A
PLG12PT18	M12x1.5	1/8	16
PLG16PT18	M16x1.5	1/8	19
PLG20PT14	M20x2.0	1/4	26
PLG27PT38	M27x2.0	3/8	35

King Drill-2D

For through coolant system with a lathe



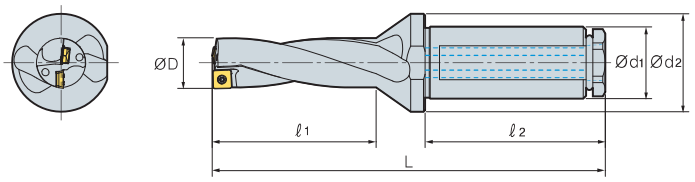
(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K2D	13020HP-04	13.0	20	25	29	50	93	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	13520HP-04	13.5	20	25	29	50	93			
	14020HP-05	14.0	20	25	31	50	96	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	15020HP-05	15.0	20	25	33	50	99			
	16020HP-05	16.0	20	25	35	50	101			
	17025HP-06	17.0	25	34	37	56	109	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	18025HP-06	18.0	25	34	39	56	112			
	19025HP-06	19.0	25	34	41	56	114			
	20025HP-07	20.0	25	34	43	56	118	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	21025HP-07	21.0	25	34	45	56	120			
	22025HP-07	22.0	25	34	47	56	122			
	23025HP-07	23.0	25	34	49	56	126			
	24032HP-09	24.0	32	44	51	60	133	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	25032HP-09	25.0	32	44	53	60	135			
	26032HP-09	26.0	32	44	55	60	137			
	27032HP-09	27.0	32	44	57	60	140			
	28032HP-09	28.0	32	44	59	60	143			
	29032HP-09	29.0	32	44	61	60	145			

Applicable inserts **G04~05**

King Drill-3D

For through coolant system with a lathe



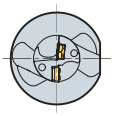
(mm)

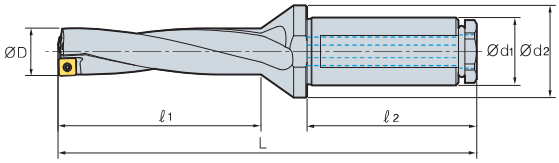
Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K3D	13020HP-04	13.0	20	25	42	50	106	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	13520HP-04	13.5	20	25	42	50	106			
	14020HP-05	14.0	20	25	45	50	110	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	14520HP-05	14.5	20	25	45	50	110			
	15020HP-05	15.0	20	25	48	50	114			
	15520HP-05	15.5	20	25	48	50	114			
	16020HP-05	16.0	20	25	51	50	117			
	16525HP-06	16.5	25	34	51	56	123	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	17025HP-06	17.0	25	34	54	56	126			
	17525HP-06	17.5	25	34	54	56	126			
	18025HP-06	18.0	25	34	57	56	130			
	18525HP-06	18.5	25	34	57	56	130			
	19025HP-06	19.0	25	34	60	56	133			
	19525HP-06	19.5	25	34	60	56	133			
	20025HP-07	20.0	25	34	63	56	138	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	20525HP-07	20.5	25	34	63	56	138			
	21025HP-07	21.0	25	34	66	56	141			
	21525HP-07	21.5	25	34	66	56	141			
	22025HP-07	22.0	25	34	69	56	144			
	22525HP-07	22.5	25	34	69	56	144			
	23025HP-07	23.0	25	34	72	56	149			
	23525HP-07	23.5	25	34	72	56	149			
	24032HP-09	24.0	32	44	75	60	157	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	24532HP-09	24.5	32	44	75	60	157			
	25032HP-09	25.0	32	44	78	60	160			
	25532HP-09	25.5	32	44	78	60	160			
	26032HP-09	26.0	32	44	81	60	163			
	26532HP-09	26.5	32	44	81	60	163			
	27032HP-09	27.0	32	44	84	60	167			
	27532HP-09	27.5	32	44	84	60	167			
	28032HP-09	28.0	32	44	87	60	171			
	28532HP-09	28.5	32	44	87	60	171			
	29032HP-09	29.0	32	44	90	60	174			
	29532HP-09	29.5	32	44	90	60	174			

Applicable inserts G04~05

King Drill-4D

For through coolant system with a lathe





(mm)

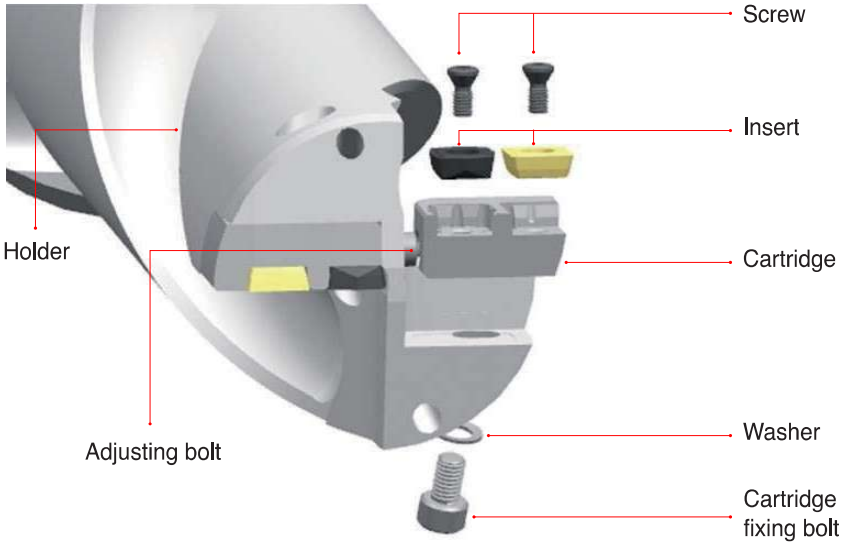
Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert	Screw	Wrench
K4D	**13020HP-04**	13.0	20	25	29	50	93	SP□T040204-□□ XO□T040204-□□	FTNA0204	TW06P
	13520HP-04	13.5	20	25	29	50	93			
	14020HP-05	14.0	20	25	59	50	124	SP□T050204-□□ XO□T050204-□□	FTNA0204	TW06P
	15020HP-05	15.0	20	25	63	50	129			
	16020HP-05	16.0	20	25	67	50	133			
	17025HP-06	17.0	25	34	71	56	143	SP□T060205-□□ XO□T060204-□□	FTKA02206S	TW07P
	18025HP-06	18.0	25	34	75	56	148			
	19025HP-06	19.0	25	34	79	56	152			
	20025HP-07	20.0	25	34	83	56	158	SP□T07T208-□□ XO□T07T205-□□	FTKA02565	TW07S
	21025HP-07	21.0	25	34	87	56	162			
	22025HP-07	22.0	25	34	91	56	166			
	23025HP-07	23.0	25	34	95	56	172			
	24032HP-09	24.0	32	44	99	60	181	SP□T090308-□□ XO□T090305-□□	FTKA0307	TW09S
	25032HP-09	25.0	32	44	103	60	185			
	26032HP-09	26.0	32	44	107	60	189			
	27032HP-09	27.0	32	44	111	60	194			
	28032HP-09	28.0	32	44	115	60	199			
	29032HP-09	29.0	32	44	119	60	203			

Applicable inserts **G04~05**

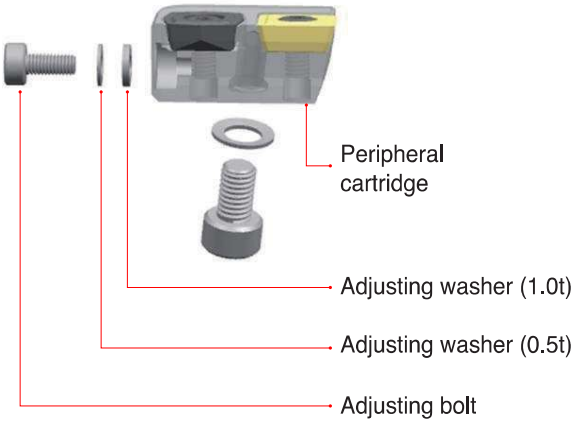
High rigidity drill produces cost efficiency due to cartridge replacement

King Drill (For large diameter drilling)

- Cartridge type for Ø61~Ø100 drilling
- Peripheral cartridge can adjust the drilling diameter within 5mm
- Easy to adjust drilling diameter with adjusting bolt



Adjustment of drill diameter

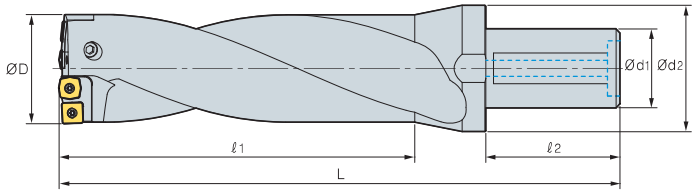


Adjustment Ø (mm)	Adjusting washer	
	Designation	Width (mm)
1	WA0305	0.5
2	WA0310	1.0
3	WA0305+WA0310	1.5
4	WA0310x2	2.0
5	WA0305+WA0310x2	2.5

※ Adjusting washer adjusts the drilling diameter within 5 mm

King Drill

For large diameter drilling



(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Cartridge Internal	Cartridge External	Screw	Wrench
K2D	616550-11	61~65	50	80	130	80	255	KDC6165C	KDC6165P	FTKA03508	TW15S
	657050-13	65~70	50	88	140	80	265	KDC6570C	KDC6570P	FTKA0410	TW15S
	707550-13	70~75	50	88	150	80	275	KDC7075C	KDC7075P	FTKA0410	TW15S
	758050-13	75~80	50	88	160	80	285	KDC7580C	KDC7580P	FTKA0410	TW15S
	808550-15	80~85	50	88	170	80	295	KDC8085C	KDC8085P	FTNC04511	TW20S
	859050-15	85~90	50	95	180	80	305	KDC8590C	KDC8590P	FTNC04511	TW20S
	909550-15	90~95	50	95	190	80	315	KDC9095C	KDC9095P	FTNC04511	TW20S
	9510050-18	95~100	50	95	200	80	325	KDC95100C	KDC95100P	FTNA0511	TW20-100
K3D	616550-11	61~65	50	80	195	80	320	KDC6165C	KDC6165P	FTKA03508	TW15S
	657050-13	65~70	50	88	210	80	335	KDC6570C	KDC6570P	FTKA0410	TW15S
	707550-13	70~75	50	88	225	80	350	KDC7075C	KDC7075P	FTKA0410	TW15S
	758050-13	75~80	50	88	240	80	365	KDC7580C	KDC7580P	FTKA0410	TW15S
	808550-15	80~85	50	88	255	80	380	KDC8085C	KDC8085P	FTNC04511	TW20S
	859050-15	85~90	50	95	270	80	395	KDC8590C	KDC8590P	FTNC04511	TW20S
	909550-15	90~95	50	95	285	80	410	KDC9095C	KDC9095P	FTNC04511	TW20S
	9510050-18	95~100	50	95	300	80	425	KDC95100C	KDC95100P	FTNA0511	TW20-100
K4D	616550-11	61~65	50	80	260	80	385	KDC6165C	KDC6165P	FTKA03508	TW15S
	657050-13	65~70	50	88	280	80	405	KDC6570C	KDC6570P	FTKA0410	TW15S
	707550-13	70~75	50	88	300	80	425	KDC7075C	KDC7075P	FTKA0410	TW15S
	758050-13	75~80	50	88	320	80	445	KDC7580C	KDC7580P	FTKA0410	TW15S
	808550-15	80~85	50	88	340	80	465	KDC8085C	KDC8085P	FTNC04511	TW20S
	859050-15	85~90	50	95	360	80	485	KDC8590C	KDC8590P	FTNC04511	TW20S
	909550-15	90~95	50	95	380	80	505	KDC9095C	KDC9095P	FTNC04511	TW20S
	9510050-18	95~100	50	95	400	80	525	KDC95100C	KDC95100P	FTNA0511	TW20-100

Applicable inserts **G04~05**

Parts

Cartridge Internal	Cartridge External	Range (Ø)	Insert Designation	Insert Quantity	Insert Designation	Insert Quantity	Screw	Wrench
KDC6165C	KDC6165P	61 ~ 65	XO□T11T306-□□	2	SP□T11T308-□□	2	FTKA03508	TW15S
KDC6570C	KDC6570P	65 ~ 70	XO□T130406-□□	2	SP□T130410-□□	2	FTKA0410	TW15S
KDC7075C	KDC7075P	70 ~ 75	XO□T130406-□□	2	SP□T130410-□□	2	FTKA0410	TW15S
KDC7580C	KDC7580P	75 ~ 80	XO□T130406-□□	2	SP□T130410-□□	2	FTKA0410	TW15S
KDC8085C	KDC8085P	80 ~ 85	XO□T15M508-□□	2	SP□T15M510-□□	2	FTNC04511	TW20S
KDC8590C	KDC8590P	85 ~ 90	XO□T15M508-□□	2	SP□T15M510-□□	2	FTNC04511	TW20S
KDC9095C	KDC9095P	90 ~ 95	XO□T15M508-□□	2	SP□T15M510-□□	2	FTNC04511	TW20S
KDC95100C	KDC95100P	95 ~ 100	XO□T180508-□□	2	SP□T180510-□□	2	FTNA0511	TW20-100

Cone shaped head indexable drill

TPDC new

- Clamping design
  - One step clamp system → Increased stability
  - Clamping system allowing to change inserts while the holder is attached on the machine → Shortened setting time
- Optimized blade design
  - Excellent chip control → Possibility to use for various types of workpieces
- Helical shaped coolant hole system
  - Wide chip pocket area secured → Better lubrication + chip flow improved
- Material technology
  - Ultra-fine substrate + Multi-layer coating applied → Excellent anti chipping & wear resistance

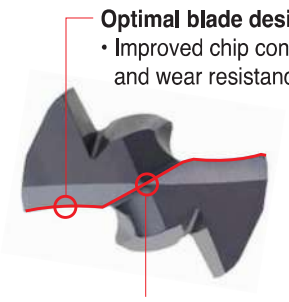
Code system of holder

TPD	C	5D	–	150	20	–	75
Top solid piercing drill	Insert type C: Cone type	Aspect ratio (L/D) 3D, 5D, 8D		Drill dia. 150: Ø15.0	Shank dia. 20: Ø20		Flute length (mm)

Code system of insert

TPD	1500	C	P
Top solid piercing drill	Drill dia. 1500: Ø15.00	Insert type C: Cone type	Machining area P: Steel, Universal M: Stainless steel K: Cast iron N: Aluminium C: Carbon fiber Reinforced plastic

Features



Optimal blade design
- Improved chip control and wear resistance

Overlap thinning
- Excellent centering and penetration

Surface treatment
- Good durability

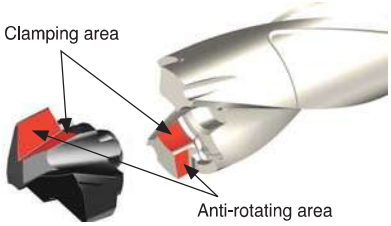
Flute polishing
- Better chip flow

Helical shaped coolant hole system
- Chip flow improved

High helix angle
- Low cutting load and good machinability

Features of clamping system

- One Step Clamp System ➡ Easy and quick tool change with good repeatability
  - Clamping area: Easy and fast tool change
  - Anti-rotating area: Performs as a stopper
  - Clamping and anti-rotating area make an acute angle to prevent insert rotation while machining



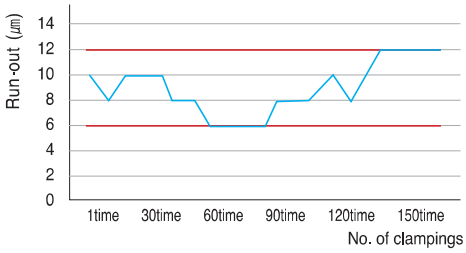
Performance evaluation

Durability test

- **Workpiece** SCM440 (HRC22)
- **Cutting conditions** Drill dia.(mm) = Ø15.0
  vc (m/min) = 90, fn (mm/rev) = 0.25
  ap (mm) = 60, Wet
- **Tools** **Inserts** TPD1500CP (PC5335)
  Holder TPDC5D-15020-75

After using 40 inserts, the setting run-out remains below 15㎛

Sustainability test



Excellent Sustaina-bility

After clamping 150 times, the drill run-out remains

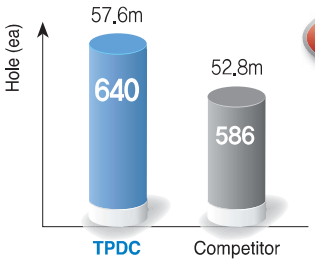
Application examples

- **Use** Part of machine
- **Workpiece** Alloy steel (SCM440, HRC22)
- **Cutting conditions** Drill dia.(mm) = Ø19.0
  vc (m/min) = 100
  fn (mm/rev) = 0.3
  ap (mm) = 90, Wet
- **Tools** **Inserts** TPD1900CP (PC5335)
  Holder TPDC5D-19025-95

TPDC

Competitor

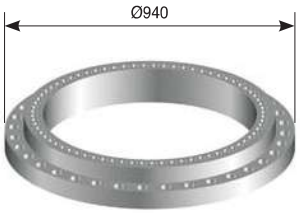
Test result



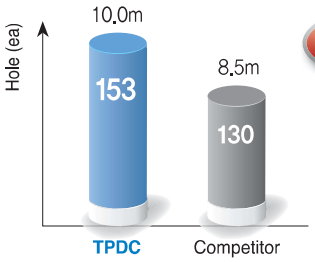
1.1 times more

Lubricative multi-layer coating prevents chipping on cutting edges

- **Use** Part of machine
- **Workpiece** Carbon steel (SM45, HRC40)
- **Cutting conditions** Drill dia.(mm) = Ø18.0
  vc (m/min) = 60
  fn (mm/rev) = 0.15
  ap (mm) = 65, Wet
- **Tools** **Inserts** TPD1800CP (PC5335)
  Holder TPDC5D-18025-90



Test result



1.2 times more

Lubricative multi-layer coating enhances wear resistance

Recommended cutting condition

Workpiece				Grade	vc	Depth of cut = 3D, 5D Feed rate (mm/rev) per drill dia. (mm)	
ISO		Workpiece	HB		m/min	Ø12.00~Ø15.99	Ø16.00~Ø25.99
P	Carbon steel	Low carbon steel	80~120	PC5335	110 (80~140)	0.15~0.30	0.20~0.35
		High carbon steel	180~280	PC5335	100 (70~130)	0.15~0.30	0.20~0.35
	Alloy steel	Low alloy steel	140~260	PC5335	110 (80~140)	0.18~0.35	0.23~0.38
		Low pre-hardened steel	200~400	PC5335	75 (50~100)	0.18~0.35	0.23~0.38
		High alloy steel	260~320	PC5335	70 (50~90)	0.18~0.30	0.20~0.35
		High pre-hardened steel	300~450	PC5335	60 (40~80)	0.18~0.30	0.20~0.35

- In case of 8D, reduce the cutting condition 40~50% lower than above after machining the beginning of hole(1.5D)
- In case of interrupted machining, reduce the feed to 0.1~0.15 around the interrupted part

How to make good insert clamping

① Clean the mounting seat with air or cloth

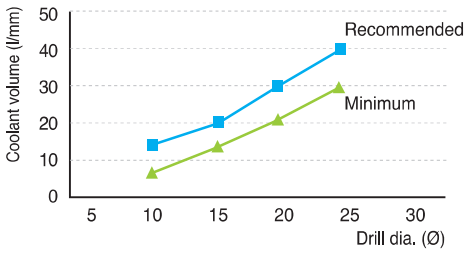
② Put an insert on the holder

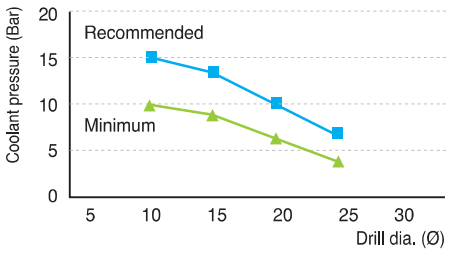
③ A part of wrench and B part of insert must be parallel to each other before clamp the insert
Turn the wrench clockwise to finish clamping

Clamped state

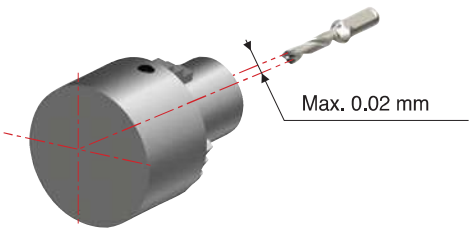
Coolant tip

- **Workpiece** SCM440 (HRC22)
- **Cutting conditions** vc (m/min) = 100, Wet

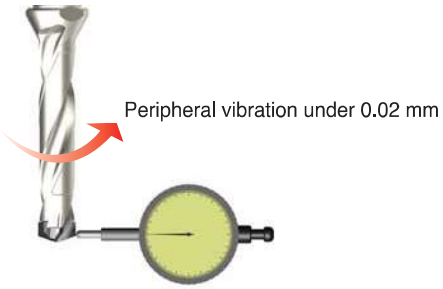




Precautions when setting

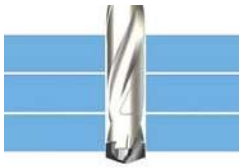
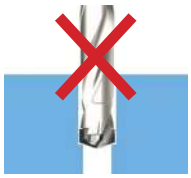


Setting of the horizontal equipment

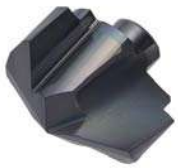


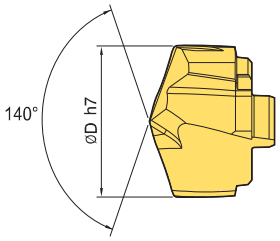
Setting of the vertical equipment

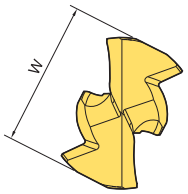
Precautions when drilling

Ramping	Overlapped	Plunging	Boring
			
1. A slope inclined more than 6° is not allowed 2. When entering, reduce the feed to 30~50%	1. Space between panels affects chip evacuation problem 2. Do not make space between panels	Not allowed	Not allowed

TPDC Insert new







(mm)

Designation		Drill dia. (ØD)	W	Grade	Holder	Wrench
TPD	1200CP	12.0	11.4	PC5335	TPDC(3, 5, 8)D-12016-(36, 60, 96)	TPDC-W12
	1220CP	12.2				
	1250CP	12.5			TPDC(3, 5, 8)D-12516-(38, 63, 100)	
	1260CP	12.6				
	1300CP	13.0	12.3	PC5335	TPDC(3, 5, 8)D-13016-(39, 65, 104)	TPDC-W13
	1350CP	13.5			TPDC(3, 5, 8)D-13516-(41, 68, 108)	
	1400CP	14.0	13.4	PC5335	TPDC(3, 5, 8)D-14016-(42, 70, 112)	TPDC-W14
	1420CP	14.2				
	1430CP	14.3				
	1450CP	14.5			TPDC(3, 5, 8)D-14516-(44, 73, 116)	
	1500CP	15.0	14.3	PC5335	TPDC(3, 5, 8)D-15020-(45, 75, 120)	TPDC-W15
	1550CP	15.5				
	1600CP	16.0	15.3	PC5335	TPDC(3, 5, 8)D-16020-(48, 80, 128)	TPDC-W16
	1630CP	16.3				
	1650CP	16.5				
	1670CP	16.7				
	1700CP	17.0	16.3	PC5335	TPDC(3, 5, 8)D-17020-(51, 85, 136)	TPDC-W17
	1750CP	17.5				
	1770CP	17.7				
	1800CP	18.0	17.3	PC5335	TPDC(3, 5, 8)D-18025-(54, 90, 144)	TPDC-W18
	1810CP	18.1				
	1850CP	18.5				
	1860CP	18.6				
	1870CP	18.7				
	1900CP	19.0	18.3	PC5335	TPDC(3, 5, 8)D-19025-(57, 95, 152)	TPDC-W19
	1920CP	19.2				
	1950CP	19.5				
	1970CP	19.7				
	2000CP	20.0	19.2	PC5335	TPDC(3,5,8)D-20025-(60,100,160)	TPDC-W20
	2050CP	20.5				
	2100CP	21.0	20.1	PC5335	TPDC(3,5,8)D-21025-(63,105,168)	TPDC-W21
	2150CP	21.5				
	2200CP	22.0	21	PC5335	TPDC(3,5,8)D-22025-(66,110,176)	TPDC-W22
	2260CP	22.6				
	2270CP	22.7				
	2250CP	22.5				
	2300CP	23.0	21.9	PC5335	TPDC(3,5,8)D-23025-(69,115,184)	TPDC-W23
	2350CP	23.5				
	2400CP	24.0	22.9	PC5335	TPDC(3,5,8)D-24032-(72,120,192)	TPDC-W24
	2450CP	24.5				
	2500CP	25.0	23.9	PC5335	TPDC(3,5,8)D-25032-(75,125,200)	TPDC-W25
	2530CP	25.3				
	2550CP	25.5				
	2580CP	25.8				
	2590CP	25.9				

※ Order made items available

Parts (Recommended torque per wrench)

(mm)

Designation	Drill dia. (ØD)	Torque (Nm)
TPDC-W12	12.00~12.99	2.5
TPDC-W13	13.00~13.99	2.5
TPDC-W14	14.00~14.99	2.5
TPDC-W15	15.00~15.99	2.5
TPDC-W16	16.00~16.99	2.5
TPDC-W17	17.00~17.99	3.5
TPDC-W18	18.00~18.99	3.5

Designation	Drill dia. (ØD)	Torque (Nm)
TPDC-W19	19.00~19.99	3.5
TPDC-W20	20.00~20.99	3.5
TPDC-W21	21.00~21.99	3.5
TPDC-W22	22.00~22.99	3.5
TPDC-W23	23.00~23.99	3.5
TPDC-W24	24.00~24.99	3.5
TPDC-W25	25.00~25.99	3.5

TPDC3D/5D/8D new

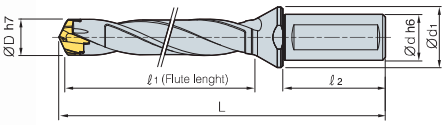


Fig.1

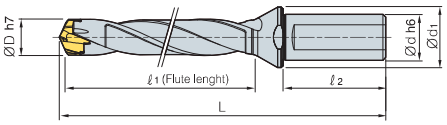


Fig.2

(mm)

Designation		ØD	Ød	Ød1	ℓ1	ℓ2	L	Insert	Fig.
TPDC	3D-12016-36	12.00~12.49	16	20	36	48	99	TPD1200C□-1249C□	1
	3D-12516-38	12.50~12.99	16	20	38	48	101	TPD1250C□-1299C□	1
	3D-13016-39	13.00~13.49	16	20	39	48	103	TPD1300C□-1349C□	1
	3D-13516-41	13.50~13.99	16	20	41	48	105	TPD1350C□-1399C□	1
	3D-14016-42	14.00~14.49	16	20	42	48	106	TPD1400C□-1449C□	1
	3D-14516-44	14.50~14.99	16	20	44	48	107	TPD1450C□-1499C□	1
	3D-15020-45	15.00~15.99	20	25	45	50	113	TPD1500C□-1599C□	2
	3D-16020-48	16.00~16.99	20	25	48	50	117	TPD1600C□-1699C□	2
	3D-17020-51	17.00~17.99	20	25	51	50	120	TPD1700C□-1799C□	2
	3D-18025-54	18.00~18.99	25	33	54	56	132	TPD1800C□-1899C□	2
	3D-19025-57	19.00~19.99	25	33	57	56	135	TPD1900C□-1999C□	2
	3D-20025-60	20.00~20.99	25	33	60	56	138	TPD2000C□-2099C□	2
	3D-21025-63	21.00~21.99	25	33	63	56	141	TPD2100C□-2199C□	2
	3D-22025-66	22.00~22.99	25	33	66	56	145	TPD2200C□-2299C□	2
	3D-23025-69	23.00~23.99	25	33	69	56	149	TPD2300C□-2399C□	2
	3D-24032-72	24.00~24.99	32	43	72	60	159	TPD2400C□-2499C□	2
	3D-25032-75	25.00~25.99	32	43	75	60	162	TPD2500C□-2599C□	2
	5D-12016-60	12.00~12.49	16	20	60	48	123	TPD1200C□-1249C□	1
	5D-12516-63	12.50~12.99	16	20	63	48	126	TPD1250C□-1299C□	1
	5D-13016-65	13.00~13.49	16	20	65	48	129	TPD1300C□-1349C□	1
	5D-13516-68	13.50~13.99	16	20	68	48	132	TPD1350C□-1399C□	1
	5D-14016-70	14.00~14.49	16	20	70	48	134	TPD1400C□-1449C□	1
	5D-14516-73	14.50~14.99	16	20	73	48	136	TPD1450C□-1499C□	1
	5D-15020-75	15.00~15.99	20	25	75	50	143	TPD1500C□-1599C□	2
	5D-16020-80	16.00~16.99	20	25	80	50	149	TPD1600C□-1699C□	2
	5D-17020-85	17.00~17.99	20	25	85	50	154	TPD1700C□-1799C□	2
	5D-18025-90	18.00~18.99	25	33	90	56	168	TPD1800C□-1899C□	2
	5D-19025-95	19.00~19.99	25	33	95	56	173	TPD1900C□-1999C□	2
	5D-20025-100	20.00~20.99	25	33	100	56	178	TPD2000C□-2099C□	2
	5D-21025-105	21.00~21.99	25	33	105	56	183	TPD2100C□-2199C□	2
	5D-22025-110	22.00~22.99	25	33	110	56	189	TPD2200C□-2299C□	2
	5D-23025-115	23.00~23.99	25	33	115	56	195	TPD2300C□-2399C□	2
	5D-24032-120	24.00~24.99	32	43	120	60	207	TPD2400C□-2499C□	2
	5D-25032-125	25.00~25.99	32	43	125	60	212	TPD2500C□-2599C□	2
	8D-12016-96	12.00~12.49	16	20	96	48	159	TPD1200C□-1249C□	1
	8D-12516-100	12.50~12.99	16	20	100	48	163	TPD1250C□-1299C□	1
	8D-13016-104	13.00~13.49	16	20	104	48	168	TPD1300C□-1349C□	1
	8D-13516-108	13.50~13.99	16	20	108	48	173	TPD1350C□-1399C□	1
	8D-14016-112	14.00~14.49	16	20	112	48	176	TPD1400C□-1449C□	1
	8D-14516-116	14.50~14.99	16	20	116	48	180	TPD1450C□-1499C□	1
	8D-15020-120	15.00~15.99	20	25	120	50	188	TPD1500C□-1599C□	2
	8D-16020-128	16.00~16.99	20	25	128	50	197	TPD1600C□-1699C□	2
	8D-17020-136	17.00~17.99	20	25	136	50	205	TPD1700C□-1799C□	2
	8D-18025-144	18.00~18.99	25	33	144	56	222	TPD1800C□-1899C□	2
	8D-19025-152	19.00~19.99	25	33	152	56	230	TPD1900C□-1999C□	2
	8D-20025-160	20.00~20.99	25	33	160	56	238	TPD2000C□-2099C□	2
	8D-21025-168	21.00~21.99	25	33	168	56	246	TPD2100C□-2199C□	2
	8D-22025-176	22.00~22.99	25	33	176	56	255	TPD2200C□-2299C□	2
	8D-23025-184	23.00~23.99	25	33	184	56	264	TPD2300C□-2399C□	2
	8D-24032-192	24.00~24.99	32	43	192	60	279	TPD2400C□-2499C□	2
	8D-25032-200	25.00~25.99	32	43	200	60	287	TPD2500C□-2599C□	2

※ The shank is based on DIN6535 and ISO9677

High precision grinding and superior clamping precision with auto-centering system

TPDB

- High precision clamping system - High precision grinding and superior clamping precision with auto-centering system
- Screw on clamping system - Easy clamping system of TPDB insert
- Sharp cutting edge - Improved chip evacuation, low cutting load, longer tool life with ultra-fine substrate and exclusive coating layer
- Holder with excellent durability - Holder with high rigidity and superb wear resistance due to special surface treatment

Code system of holder

TPD B 200 – 25 – 5

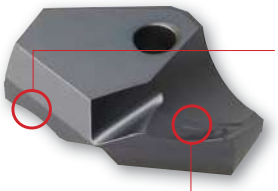
TPD	B	200	25	5
Top solid piercing drill	Insert type	Drill dia.	Shank dia.	Aspect ratio
	B: Blade type	200: Ø20.0	25: Ø25	3D, 5D, 8D

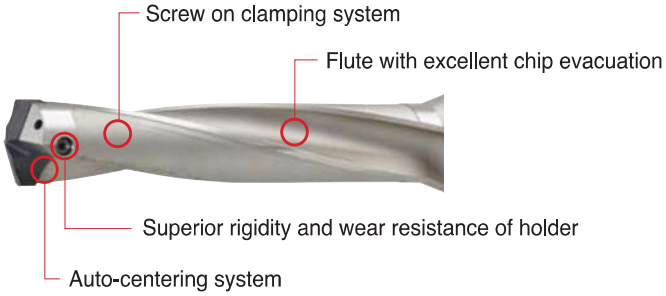
Code system of insert

TPD 200 B

TPD	200	B
Top solid piercing drill	Drill dia.	Insert type
	200: Ø20.0	B: Blade type

Features

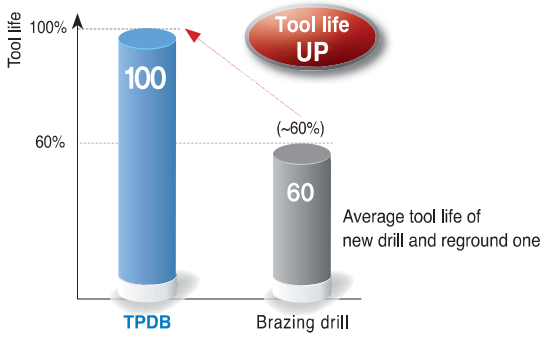




Tool cost

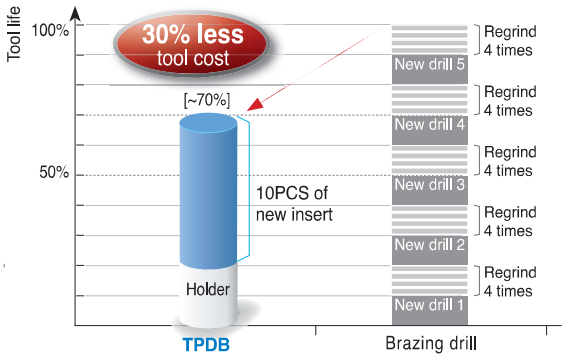
Comparison of 1 insert tool life

- Exclusive coating and substrate
- Usable till the end of wear (no need regrinding)



Comparison of tool cost when machining 1000PCS of workpiece

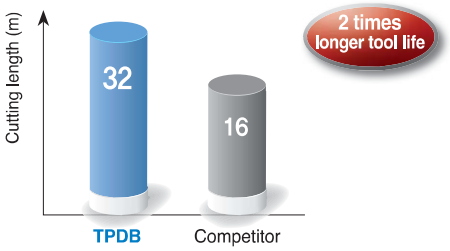
- 40% longer tool life
- No need regrind
- Less insert change
- 30% less tool cost



Application example

- **Use** Part of Automobile
- **Workpiece** GDC500
- **Cutting conditions** vc (m/min) = 98, fn (mm/rev) = 0.31
  ap (mm) = 40, Inner coolant system
- **Tools** **Inserts** TPD195B (PC5300)
  Holder TPDB195-25-3
- **Machine** MCT (Vertical)

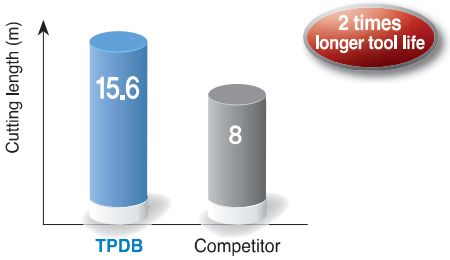
■ **Test result**



• 200% longer tool life than competitor's

- **Use** Part of Heavy Equipment
- **Workpiece** Hot Forged steel
- **Cutting conditions** vc (m/min) = 85, fn (mm/rev) = 0.2
  ap (mm) = 20, Inner coolant system
- **Tools** **Inserts** TPD210B (PC5300)
  Holder TPDB210-25-3
- **Machine** MCT (Vertical)

■ **Test result**



• 200% longer tool life than competitor's

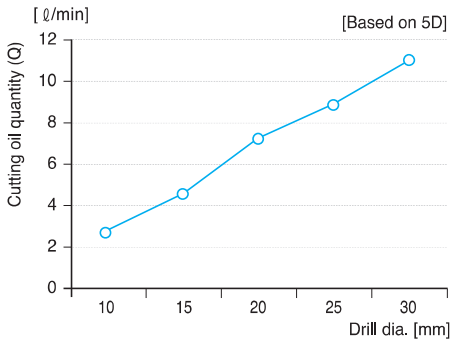
Recommended cutting condition

Workpiece				Grade	vc	Depth of cut = 3D~5D Feed rate (mm/rev) per drill dia. (mm)		
ISO		Workpiece	HB		m/min	10~15.9	16~24.9	25~32.9
P	Carbon steel	Low carbon steel	80~120	PC5300, PC5335	110 (80~140)	0.15~0.30	0.20~0.35	0.25~0.40
		High carbon steel	180~280	PC5300, PC5335	100 (70~130)	0.15~0.30	0.20~0.35	0.25~0.40
	Alloy steel	Low alloy steel	140~260	PC5300	110 (80~140)	0.18~0.35	0.23~0.38	0.28~0.43
		Low pre-hardened steel	200~400	PC5300	75 (50~100)	0.18~0.35	0.23~0.38	0.28~0.43
		High alloy steel	260~320	PC5300	70 (50~90)	0.18~0.30	0.20~0.35	0.25~0.40
		High pre-hardened steel	300~450	PC5300	60 (40~80)	0.18~0.30	0.20~0.35	0.25~0.40
M	Stainless steel	Austenite series	135~275	PC5300	50 (30~70)	0.13~0.25	0.15~0.30	0.17~0.33
		Ferrite series Martensite series	13~275	PC5300	55 (40~70)	0.13~0.25	0.15~0.30	0.17~0.33
K	Cast iron	Gray cast iron	150~230	PC5300	110 (80~140)	0.18~0.35	0.20~0.40	0.25~0.45
		Ductile cast iron	160~260	PC5300	100 (70~130)	0.18~0.35	0.20~0.40	0.25~0.45
S	Heat resisting steel	Ni-heat resisting alloy	130~400	PC5300	40 (20~60)	0.10~0.20	0.12~0.22	0.13~0.25
		Ti-heat resisting alloy	130~400	PC5300	40 (20~60)	0.10~0.20	0.12~0.22	0.13~0.25
		High-hardened steel	Over 400	PC5300	35 (20~50)	0.10~0.20	0.12~0.22	0.13~0.25

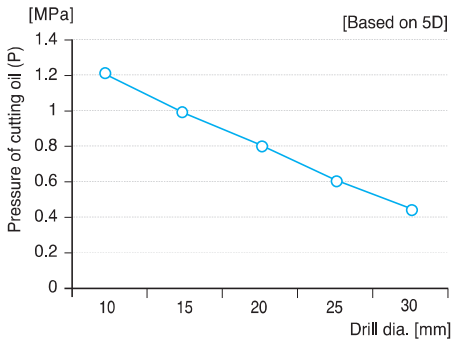
• In case of 8D, reduce the cutting conditions to 40~50% or machine the beginning of hole first.(1.5D)
• In case of interrupted machining, reduce the feed to 30~50% machining around the interrupted part

Technical information

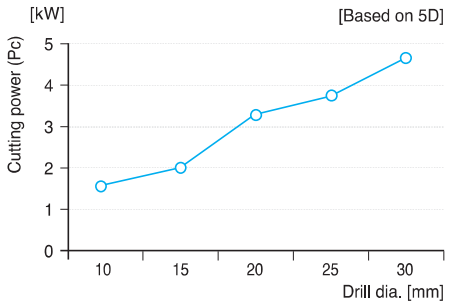
Cutting oil quantity



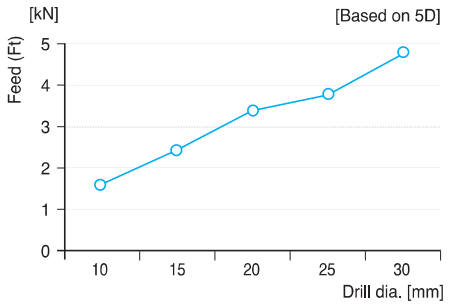
Pressure of cutting oil



Cutting power



Feed



How to clamp a TPDB insert

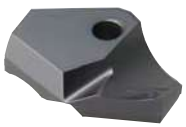
Clamping an insert on a holder

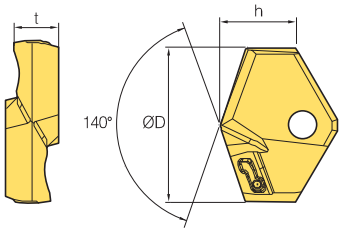
- Put an insert in the holder
- As the Fig.1, clamp the insert while pushing it to the V shaped groove of the holder
- Screw the insert

Changing an insert on the machine

- Separate the insert from the holder
- As the Fig.2, clean the insert seat
- Place the insert to the mounting seat
- As the Fig.3, clamp the insert while pushing it to the V shaped groove of the holder

TPDB Insert





(mm)

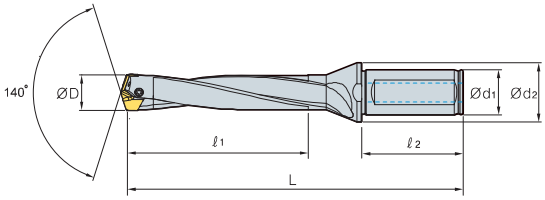
Designation		Grade	ØD	h	t
TPD	100B~109B	PC5300, PC5335	10.0~10.9	5.5	3.5
	110B~119B	PC5300, PC5335	11.0~11.9	5.8	3.5
	120B~129B	PC5300, PC5335	12.0~12.9	6.3	3.5
	130B~139B	PC5300, PC5335	13.0~13.9	6.5	4.0
	140B~149B	PC5300, PC5335	14.0~14.9	6.8	4.0
	150B~159B	PC5300, PC5335	15.0~15.9	7.0	4.0
	160B~169B	PC5300, PC5335	16.0~16.9	7.7	5.5
	170B~179B	PC5300, PC5335	17.0~17.9	7.9	5.5
	180B~189B	PC5300, PC5335	18.0~18.9	8.1	6.0
	190B~199B	PC5300, PC5335	19.0~19.9	8.3	6.0
	200B~209B	PC5300, PC5335	20.0~20.9	9.7	6.5
	210B~219B	PC5300, PC5335	21.0~21.9	9.4	6.5
	220B~229B	PC5300, PC5335	22.0~22.9	9.6	7.0
	230B~239B	PC5300, PC5335	23.0~23.9	9.8	7.0
	240B~249B	PC5300, PC5335	24.0~24.9	10.7	7.5
	250B~259B	PC5300, PC5335	25.0~25.9	10.9	7.5
	260B~269B	PC5300, PC5335	26.0~26.9	11.0	8.5
	270B~279B	PC5300, PC5335	27.0~27.9	11.8	8.5
	280B~289B	PC5300, PC5335	28.0~28.9	12.6	9.5
	290B~299B	PC5300, PC5335	29.0~29.9	12.9	9.5
	300B~309B	PC5300, PC5335	30.0~30.9	13	10
	310B~319B	PC5300, PC5335	31.0~31.9	13.3	10
	320B~329B	PC5300, PC5335	32.0~32.9	13.5	10

Parts

(mm)

Designation		Drill dia. (ØD)	Screw	Wrench	Torque (NM)
TPD	100B~129B	10.0~12.9	FTNB0209	TW06P	0.4
	130B~149B	13.0~14.9	FTNB02512	TW07S	0.8
	150B~179B	15.0~17.9	FTNB02514	TW07S	0.8
	180B~199B	18.0~19.9	FTNB0316	TW09S	1.2
	200B~239B	20.0~23.9	FTNB0319	TW09S	1.2
	240B~259B	24.0~25.9	FTNB03522	TW15S	3
	260B~279B	26.0~27.9	FTNB03524	TW15S	3
	280B~299B	28.0~29.9	FTNB0426	TW15S	3
	300B~329B	30.0~32.9	FTNB0528	TW20-100	4

TPDB-3D

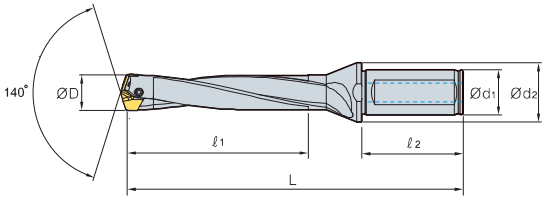


(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert
TPDB	100-16-3	10.0~10.4	16	20	30.0	48	95	TPD100B~104B
	105-16-3	10.5~10.9	16	20	31.5	48	96	TPD105B~109B
	110-16-3	11.0~11.4	16	20	33.0	48	98	TPD110B~114B
	115-16-3	11.5~11.9	16	20	34.5	48	99	TPD115B~119B
	120-16-3	12.0~12.4	16	20	36.0	48	102	TPD120B~124B
	125-16-3	12.5~12.9	16	20	37.5	48	104	TPD125B~129B
	130-16-3	13.0~13.4	16	20	39.0	48	107	TPD130B~134B
	135-16-3	13.5~13.9	16	20	40.5	48	109	TPD135B~139B
	140-16-3	14.0~14.4	16	20	42.0	48	111	TPD140B~144B
	145-16-3	14.5~14.9	16	20	43.5	48	114	TPD145B~149B
	150-20-3	15.0~15.4	20	25	45.0	50	118	TPD150B~154B
	155-20-3	15.5~15.9	20	25	46.5	50	120	TPD155B~159B
	160-20-3	16.0~16.4	20	25	48.0	50	122	TPD160B~164B
	165-20-3	16.5~16.9	20	25	49.5	50	124	TPD165B~169B
	170-20-3	17.0~17.4	20	25	51.0	50	127	TPD170B~174B
	175-20-3	17.5~17.9	20	25	52.5	50	129	TPD175B~179B
	180-25-3	18.0~18.4	25	33	54.0	56	137	TPD180B~184B
	185-25-3	18.5~18.9	25	33	55.5	56	139	TPD185B~189B
	190-25-3	19.0~19.4	25	33	57.0	56	142	TPD190B~194B
	195-25-3	19.5~19.9	25	33	58.5	56	144	TPD195B~199B
	200-25-3	20.0~20.4	25	33	60.0	56	146	TPD200B~204B
	205-25-3	20.5~20.9	25	33	61.5	56	148	TPD205B~209B
	210-25-3	21.0~21.4	25	33	63.0	60	151	TPD210B~214B
	215-25-3	21.5~21.9	25	33	64.5	60	153	TPD215B~219B
	220-25-3	22.0~22.4	25	33	66.0	60	155	TPD220B~224B
	225-25-3	22.5~22.9	25	33	67.5	60	157	TPD225B~229B
	230-25-3	23.0~23.4	25	33	69.0	60	160	TPD230B~234B
	235-25-3	23.5~23.9	25	33	70.5	60	162	TPD235B~239B
	240-32-3	24.0~24.4	32	43	72.0	60	168	TPD240B~244B
	245-32-3	24.5~24.9	32	43	73.5	60	170	TPD245B~249B
	250-32-3	25.0~25.4	32	43	75.0	60	173	TPD250B~254B
	255-32-3	25.5~25.9	32	43	76.5	60	175	TPD255B~259B
	260-32-3	26.0~26.9	32	43	78.0	60	177	TPD260B~269B
	270-32-3	27.0~27.9	32	43	81.0	60	182	TPD270B~279B
	280-32-3	28.0~28.9	32	43	84.0	60	186	TPD280B~289B
	290-32-3	29.0~29.9	32	43	87.0	60	191	TPD290B~299B
	300-32-3	30.0~30.9	32	43	90.0	60	194	TPD300B~309B
	310-32-3	31.0~31.9	32	43	93.0	60	199	TPD310B~319B
	320-32-3	32.0~32.9	32	43	96.0	60	201	TPD320B~329B

Applicable inserts G35

TPDB-5D



(mm)

Designation		ØD	Ød1	Ød2	ℓ1	ℓ2	L	Insert
TPDB	100-16-5	10.0~10.4	16	20	50.0	48	115	TPD100B~104B
	105-16-5	10.5~10.9	16	20	52.5	48	117	TPD105B~109B
	110-16-5	11.0~11.4	16	20	55.0	48	120	TPD110B~114B
	115-16-5	11.5~11.9	16	20	57.5	48	123	TPD115B~119B
	120-16-5	12.0~12.4	16	20	60.0	48	126	TPD120B~124B
	125-16-5	12.5~12.9	16	20	62.5	48	129	TPD125B~129B
	130-16-5	13.0~13.4	16	20	65.0	48	133	TPD130B~134B
	135-16-5	13.5~13.9	16	20	67.5	48	136	TPD135B~139B
	140-16-5	14.0~14.4	16	20	70.0	48	139	TPD140B~144B
	145-16-5	14.5~14.9	16	20	72.5	48	143	TPD145B~149B
	150-20-5	15.0~15.4	20	25	75.0	50	148	TPD150B~154B
	155-20-5	15.5~15.9	20	25	77.5	50	151	TPD155B~159B
	160-20-5	16.0~16.4	20	25	80.0	50	154	TPD160B~164B
	165-20-5	16.5~16.9	20	25	82.5	50	157	TPD165B~169B
	170-20-5	17.0~17.4	20	25	85.0	50	161	TPD170B~174B
	175-20-5	17.5~17.9	20	25	87.5	50	164	TPD175B~179B
	180-25-5	18.0~18.4	25	33	90.0	56	173	TPD180B~184B
	185-25-5	18.5~18.9	25	33	92.5	56	176	TPD185B~189B
	190-25-5	19.0~19.4	25	33	95.0	56	180	TPD190B~194B
	195-25-5	19.5~19.9	25	33	97.5	56	183	TPD195B~199B
	200-25-5	20.0~20.4	25	33	100.0	56	186	TPD200B~204B
	205-25-5	20.5~20.9	25	33	102.5	56	189	TPD205B~209B
	210-25-5	21.0~21.4	25	33	105.0	60	193	TPD210B~214B
	215-25-5	21.5~21.9	25	33	107.5	60	196	TPD215B~219B
	220-25-5	22.0~22.4	25	33	110.0	60	199	TPD220B~224B
	225-25-5	22.5~22.9	25	33	112.5	60	202	TPD225B~229B
	230-25-5	23.0~23.4	25	33	115.0	60	206	TPD230B~234B
	235-25-5	23.5~23.9	25	33	117.5	60	209	TPD235B~239B
	240-32-5	24.0~24.4	32	43	120.0	60	216	TPD240B~244B
	245-32-5	24.5~24.9	32	43	122.5	60	219	TPD245B~249B
	250-32-5	25.0~25.4	32	43	125.0	60	223	TPD250B~254B
	255-32-5	25.5~25.9	32	43	127.5	60	226	TPD255B~259B
	260-32-5	26.0~26.9	32	43	130.0	60	229	TPD260B~269B
	270-32-5	27.0~27.9	32	43	135.0	60	236	TPD270B~279B
	280-32-5	28.0~28.9	32	43	140.0	60	242	TPD280B~289B
	290-32-5	29.0~29.9	32	43	145.0	60	249	TPD290B~299B
	300-32-5	30.0~30.9	32	43	150.0	60	254	TPD300B~309B
	310-32-5	31.0~31.9	32	43	155.0	60	261	TPD310B~319B
	320-32-5	32.0~32.9	32	43	160.0	60	265	TPD320B~329B

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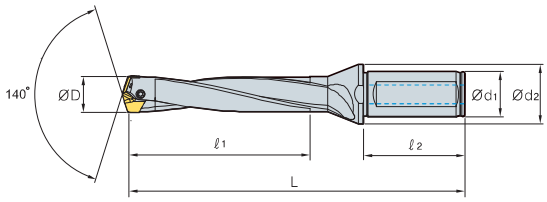
TPDB-8D



(mm)

Designation		ØD	Ød$_1$	Ød$_2$	ℓ$_1$	ℓ$_2$	L	Insert
TPDB	100-16-8	10.0~10.4	16	20	80	48	145.0	TPD100B~104B
	105-16-8	10.5~10.9	16	20	84	48	149.0	TPD105B~109B
	110-16-8	11.0~11.4	16	20	88	48	153.0	TPD110B~114B
	115-16-8	11.5~11.9	16	20	92	48	157.0	TPD115B~119B
	120-16-8	12.0~12.4	16	20	96	48	162.0	TPD120B~124B
	125-16-8	12.5~12.9	16	20	100	48	166.5	TPD125B~129B
	130-16-8	13.0~13.4	16	20	104	48	172.0	TPD130B~134B
	135-16-8	13.5~13.9	16	20	108	48	176.5	TPD135B~139B
	140-16-8	14.0~14.4	16	20	112	48	181.0	TPD140B~144B
	145-16-8	14.5~14.9	16	20	116	48	186.5	TPD145B~149B
	150-20-8	15.0~15.4	20	25	120	50	193.0	TPD150B~154B
	155-20-8	15.5~15.9	20	25	124	50	197.5	TPD155B~159B
	160-20-8	16.0~16.4	20	25	128	50	202.0	TPD160B~164B
	165-20-8	16.5~16.9	20	25	132	50	206.5	TPD165B~169B
	170-20-8	17.0~17.4	20	25	136	50	212.0	TPD170B~174B
	175-20-8	17.5~17.9	20	25	140	50	216.5	TPD175B~179B
	180-25-8	18.0~18.4	25	33	144	56	227.0	TPD180B~184B
	185-25-8	18.5~18.9	25	33	148	56	231.5	TPD185B~189B
	190-25-8	19.0~19.4	25	33	152	56	237.0	TPD190B~194B
	195-25-8	19.5~19.9	25	33	156	56	241.5	TPD195B~199B
	200-25-8	20.0~20.4	25	33	160	56	246.0	TPD200B~204B
	205-25-8	20.5~20.9	25	33	164	56	250.5	TPD205B~209B
	210-25-8	21.0~21.4	25	33	168	60	256.0	TPD210B~214B
	215-25-8	21.5~21.9	25	33	172	60	260.5	TPD215B~219B
	220-25-8	22.0~22.4	25	33	176	60	265.0	TPD220B~224B
	225-25-8	22.5~22.9	25	33	180	60	269.5	TPD225B~229B
	230-25-8	23.0~23.4	25	33	184	60	275.0	TPD230B~234B
	235-25-8	23.5~23.9	25	33	188	60	279.5	TPD235B~239B
	240-32-8	24.0~24.4	32	43	192	60	288.0	TPD240B~244B
	245-32-8	24.5~24.9	32	43	196	60	292.5	TPD245B~249B
	250-32-8	25.0~25.4	32	43	200	60	298.0	TPD250B~254B
	255-32-8	25.5~25.9	32	43	204	60	302.5	TPD255B~259B
	260-32-8	26.0~26.9	32	43	208	60	307.0	TPD260B~269B
	270-32-8	27.0~27.9	32	43	216	60	317.0	TPD270B~279B
	280-32-8	28.0~28.9	32	43	224	60	326.0	TPD280B~289B
	290-32-8	29.0~29.9	32	43	232	60	336.0	TPD290B~299B
	300-32-8	30.0~30.9	32	43	240	60	344.0	TPD300B~309B
	310-32-8	31.0~31.9	32	43	248	60	354.0	TPD310B~319B
	320-32-8	32.0~32.9	32	43	256	60	361.0	TPD320B~329B

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