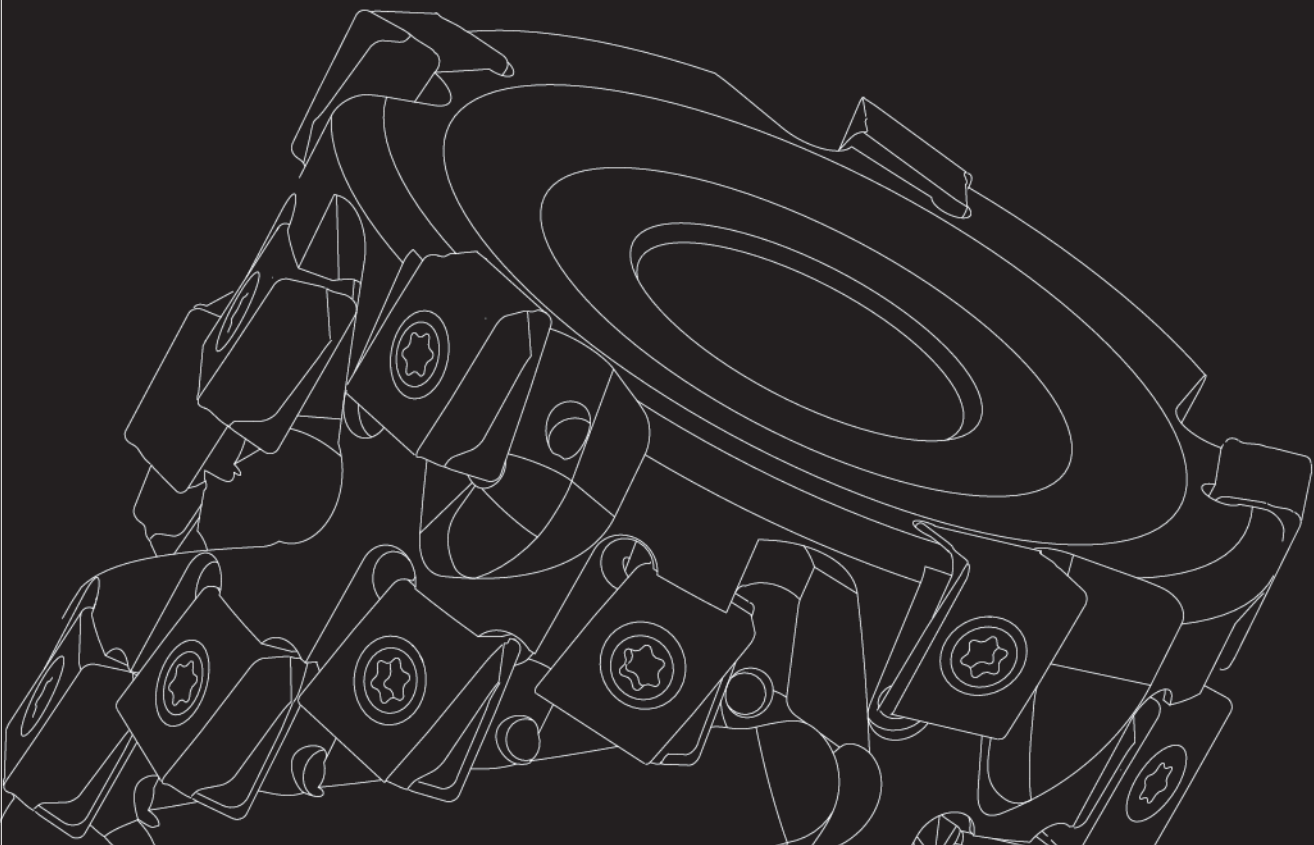


CUTTING TOOL CATALOGUE



Product Features and Applications

- Product range: 3*Dc and 5*Dc. With internal and external coolant,
- Diameter range: 3-16mm;
- 140° drill tip angle design, good versatility, suitable for drilling in different materials
- Nanostructured PVD coating technology improves the toughness and wear resistance of tools.



D106

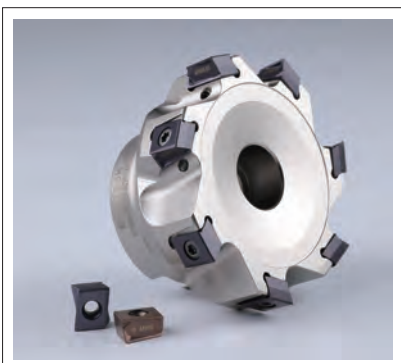
Solid Carbide Drill for Universal Use



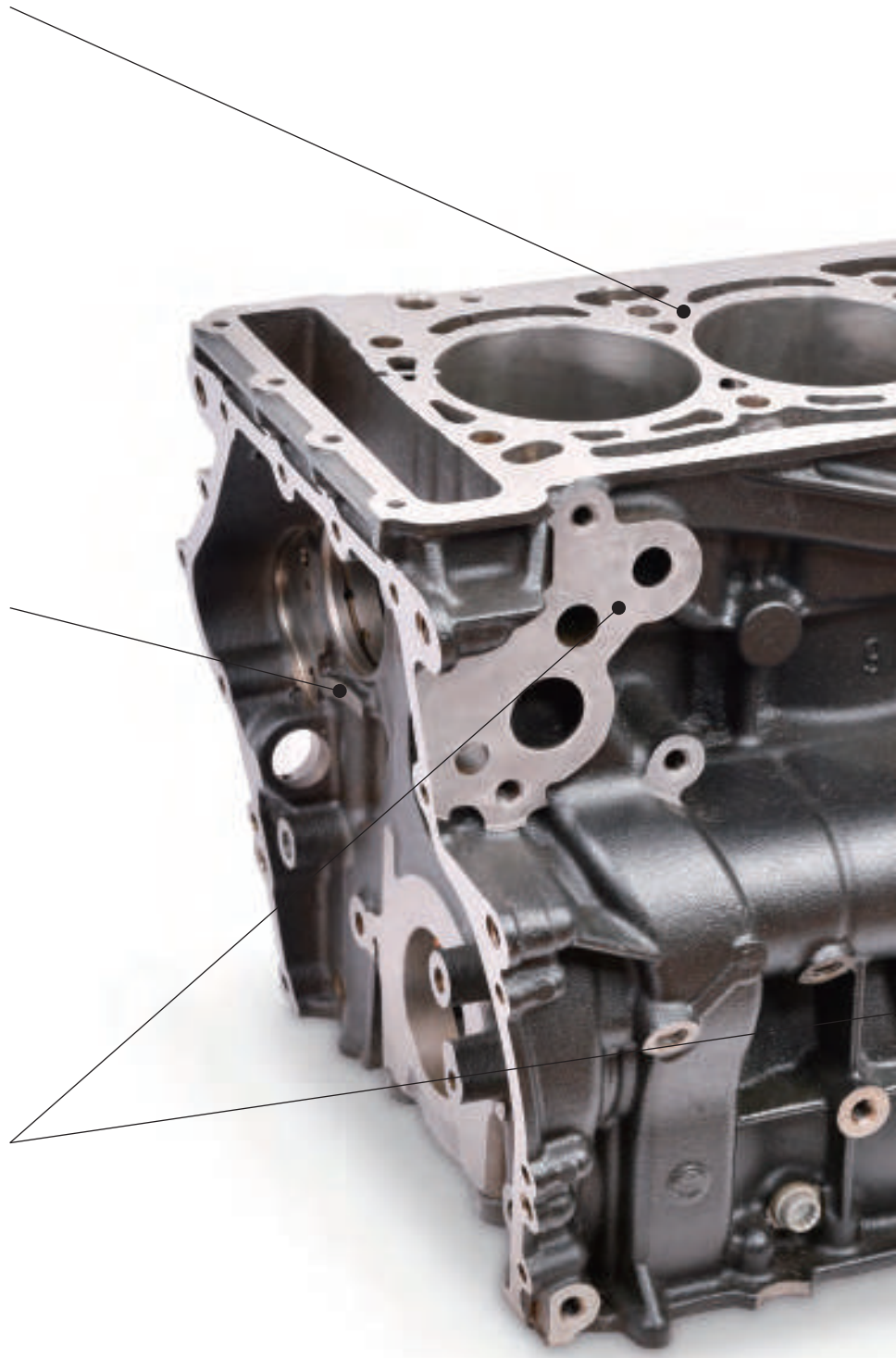
AFM45-XN09-W milling cutter with heptagon inserts, extra close pitch with wedge clamping, combined with heat resistant CVD coated inserts. The ideal choice of cast iron rough milling.



APE90-LN09/LN13 porcupine milling cutter uses tangential insert with helical edge profile. The high strength insert have 4 cutting edges, offering high productivity, machining reliability and cost efficiency.



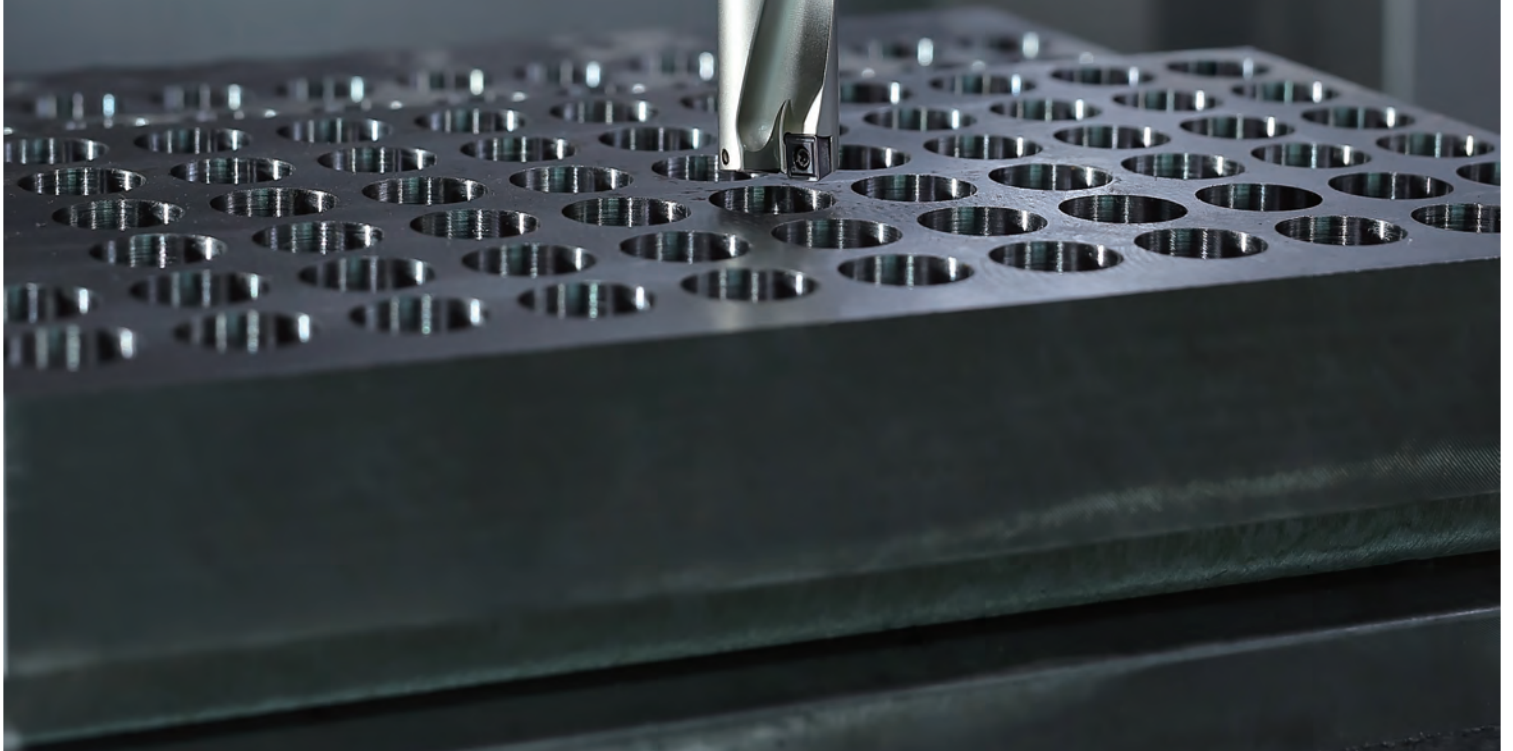
ASM90-LN09/LN13 square shoulder milling cutter with 4 cutting edge tangential inserts with helical edge profile. The reliable cutting edge can adopt increased fz by 30%, and also bring on higher metal removal rate and productivity.



ACHTTECK

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ACHTTECK
HP-3D220-S32-S07



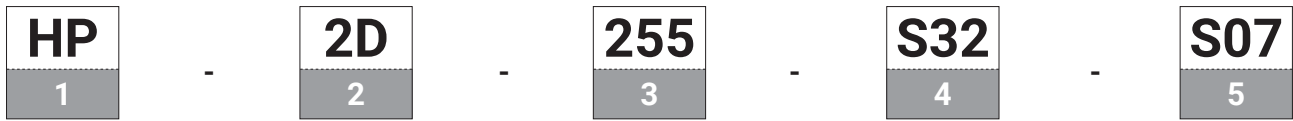
ACHTTECK

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Drill holders

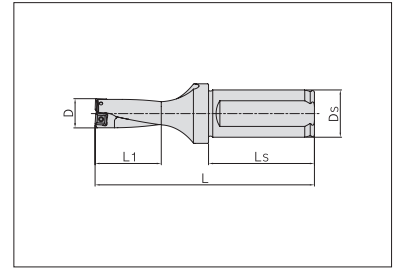
Drilling Holder Denomination System



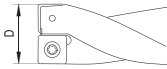


1	HP	Machining method	Represent for high productivity machining			
2	2D	Length-diameter ratio	2D, 3D, 4D,			
3	255	Tool diameter	255-25.5mm, 500-50mm			
4	S32	Shank diameter	S20=20mm	S25=25mm	S32=32mm	S40=40mm
5	S07	Inserts shape and edge length	If the insert shape is "S", it means the cutting edge length is 7mm, if the insert shape is "W", the code is "W07"			

DP Series Drilling Holder

Length-diameter ratio: 2D



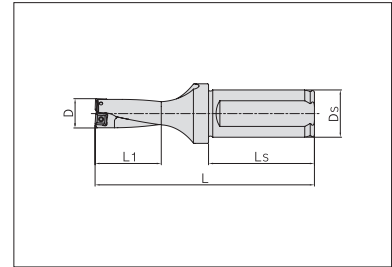
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-2D130-S20-S05	13.0	29	99	20	50	SPMT050204E-DP
HP-2D135-S20-S05	13.5	30	100	20	50	
HP-2D140-S20-S05	14.0	31	101	20	50	
HP-2D145-S20-S05	14.5	32	102	20	50	
HP-2D150-S20-S05	15.0	33	103	20	50	
HP-2D155-S25-S06	15.5	34	115	25	56	SPMT060204E-DP
HP-2D160-S25-S06	16.0	35	116	25	56	
HP-2D165-S25-S06	16.5	36	117	25	56	
HP-2D170-S25-S06	17.0	37	118	25	56	
HP-2D175-S25-S06	17.5	38	119	25	56	
HP-2D180-S25-S06	18.0	39	120	25	56	
HP-2D185-S25-S06	18.5	40	121	25	56	
HP-2D190-S25-S06	19.0	41	122	25	56	
HP-2D195-S25-S06	19.5	42	123	25	56	
HP-2D200-S25-S06	20.0	43	124	25	56	
HP-2D205-S25-S06	20.5	44	125	25	56	
HP-2D210-S25-S06	21.0	45	126	25	56	
HP-2D215-S25-S06	21.5	46	127	25	56	
HP-2D220-S32-S07	22.0	47	137	32	60	SPMT07T308E-DP
HP-2D225-S32-S07	22.5	48	138	32	60	
HP-2D230-S32-S07	23.0	49	139	32	60	
HP-2D235-S32-S07	23.5	50	140	32	60	
HP-2D240-S32-S07	24.0	51	141	32	60	
HP-2D245-S32-S07	24.5	52	142	32	60	
HP-2D250-S32-S07	25.0	53	143	32	60	
HP-2D255-S32-S07	25.5	54	144	32	60	
HP-2D260-S32-S07	26.0	55	145	32	60	
HP-2D265-S32-S07	26.5	56	146	32	60	
HP-2D270-S32-S07	27.0	57	147	32	60	
HP-2D275-S32-S07	27.5	58	148	32	60	

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
13-15	AST2043-60	AWF-T06
15.5-21.5	AST2255-60	AWF-T06
22-27.5	AST25065-60S	AWF-T08



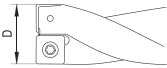


DP Series Drilling Holder

Length-diameter ratio: 2D



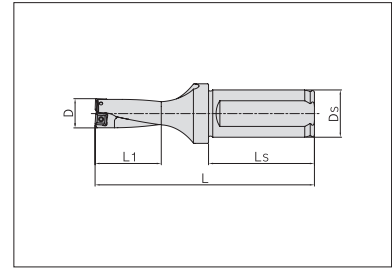
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-2D280-S32-S09	28.0	59	149	32	60	SPMT090408E-DP
HP-2D285-S32-S09	28.5	60	150	32	60	
HP-2D290-S32-S09	29.0	61	151	32	60	
HP-2D295-S32-S09	29.5	63	153	32	60	
HP-2D300-S32-S09	30.0	65	155	32	60	
HP-2D310-S32-S09	31.0	67	157	32	60	
HP-2D320-S32-S09	32.0	69	159	32	60	
HP-2D330-S32-S09	33.0	71	161	32	60	
HP-2D340-S40-S11	34.0	73	178	40	70	SPMT110408E-DP
HP-2D350-S40-S11	35.0	75	180	40	70	
HP-2D360-S40-S11	36.0	77	182	40	70	
HP-2D370-S40-S11	37.0	79	184	40	70	
HP-2D380-S40-S11	38.0	81	186	40	70	
HP-2D390-S40-S11	39.0	83	188	40	70	
HP-2D400-S40-S11	40.0	85	190	40	70	
HP-2D410-S40-S11	41.0	87	192	40	70	
HP-2D420-S40-S14	42.0	89	194	40	70	SPMT140512E-DP
HP-2D430-S40-S14	43.0	91	196	40	70	
HP-2D440-S40-S14	44.0	93	198	40	70	
HP-2D450-S40-S14	45.0	95	200	40	70	
HP-2D460-S40-S14	46.0	97	202	40	70	
HP-2D470-S40-S14	47.0	99	204	40	70	
HP-2D480-S40-S14	48.0	101	206	40	70	
HP-2D490-S40-S14	49.0	103	208	40	70	
HP-2D500-S40-S14	50.0	105	210	40	70	

Drilling holders

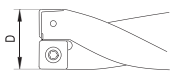


Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
28-33	AST35084-60H	AWF-T15
34-41	AST410-60H	AWF-T15
42-50	AST5126-60	AWF-T20

DP Series Drilling Holder

Length-diameter ratio: 3D



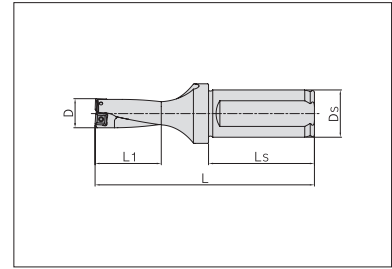
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-3D130-S20-S05	13.0	42	112	20	50	SPMT050204E-DP
HP-3D135-S20-S05	13.5	44	114	20	50	
HP-3D140-S20-S05	14.0	45	115	20	50	
HP-3D145-S20-S05	14.5	47	117	20	50	
HP-3D150-S20-S05	15.0	48	118	20	50	
HP-3D155-S25-S06	15.5	50	131	25	56	SPMT060204E-DP
HP-3D160-S25-S06	16.0	51	132	25	56	
HP-3D165-S25-S06	16.5	53	134	25	56	
HP-3D170-S25-S06	17.0	54	135	25	56	
HP-3D175-S25-S06	17.5	56	137	25	56	
HP-3D180-S25-S06	18.0	57	138	25	56	
HP-3D185-S25-S06	18.5	59	140	25	56	
HP-3D190-S25-S06	19.0	60	141	25	56	
HP-3D195-S25-S06	19.5	62	143	25	56	
HP-3D200-S25-S06	20.0	63	144	25	56	
HP-3D205-S25-S06	20.5	65	146	25	56	
HP-3D210-S25-S06	21.0	66	147	25	56	
HP-3D215-S25-S06	21.5	68	149	25	56	
HP-3D220-S32-S07	22.0	69	159	32	60	SPMT07T308E-DP
HP-3D225-S32-S07	22.5	71	161	32	60	
HP-3D230-S32-S07	23.0	72	162	32	60	
HP-3D235-S32-S07	23.5	74	164	32	60	
HP-3D240-S32-S07	24.0	75	165	32	60	
HP-3D245-S32-S07	24.5	77	167	32	60	
HP-3D250-S32-S07	25.0	78	168	32	60	
HP-3D255-S32-S07	25.5	80	170	32	60	
HP-3D260-S32-S07	26.0	81	171	32	60	
HP-3D265-S32-S07	26.5	83	173	32	60	
HP-3D270-S32-S07	27.0	84	174	32	60	
HP-3D275-S32-S07	27.5	86	176	32	60	

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
13-15	AST2043-60	AWF-T06
15.5-21.5	AST2255-60	AWF-T06
22-27.5	AST25065-60S	AWF-T08



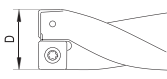


DP Series Drilling Holder

Length-diameter ratio: 3D



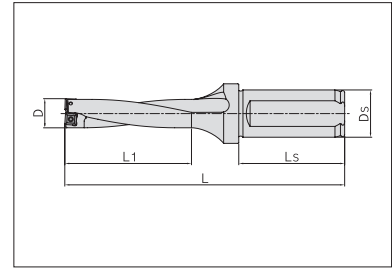
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-3D280-S32-S09	28.0	87	177	32	60	SPMT090408E-DP
HP-3D285-S32-S09	28.5	89	179	32	60	
HP-3D290-S32-S09	29.0	90	180	32	60	
HP-3D295-S32-S09	29.5	93	183	32	60	
HP-3D300-S32-S09	30.0	95	185	32	60	
HP-3D310-S32-S09	31.0	98	188	32	60	
HP-3D320-S32-S09	32.0	101	191	32	60	
HP-3D330-S32-S09	33.0	104	194	32	60	
HP-3D340-S40-S11	34.0	107	212	40	70	SPMT110408E-DP
HP-3D350-S40-S11	35.0	110	215	40	70	
HP-3D360-S40-S11	36.0	113	218	40	70	
HP-3D370-S40-S11	37.0	116	221	40	70	
HP-3D380-S40-S11	38.0	119	224	40	70	
HP-3D390-S40-S11	39.0	122	227	40	70	
HP-3D400-S40-S11	40.0	125	230	40	70	
HP-3D410-S40-S11	41.0	128	233	40	70	
HP-3D420-S40-S14	42.0	131	236	40	70	SPMT140512E-DP
HP-3D430-S40-S14	43.0	134	239	40	70	
HP-3D440-S40-S14	44.0	137	242	40	70	
HP-3D450-S40-S14	45.0	140	245	40	70	
HP-3D460-S40-S14	46.0	143	248	40	70	
HP-3D470-S40-S14	47.0	146	251	40	70	
HP-3D480-S40-S14	48.0	149	254	40	70	
HP-3D490-S40-S14	49.0	152	257	40	70	
HP-3D500-S40-S14	50.0	155	260	40	70	

Drilling holders

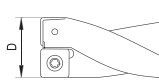


Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
28-33	AST35084-60H	AWF-T15
34-41	AST410-60H	AWF-T15
42-50	AST5126-60	AWF-T20

DP Series Drilling holder

Length-diameter ratio: 4D



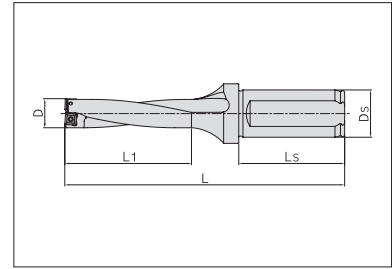
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-4D130-S20-S05	13.0	55	125	20	50	SPMT050204E-DP
HP-4D135-S20-S05	13.5	57	127	20	50	
HP-4D140-S20-S05	14.0	59	129	20	50	
HP-4D145-S20-S05	14.5	61	131	20	50	
HP-4D150-S20-S05	15.0	63	133	20	50	
HP-4D155-S25-S06	15.5	65	146	25	56	SPMT060204E-DP
HP-4D160-S25-S06	16.0	67	148	25	56	
HP-4D165-S25-S06	16.5	69	150	25	56	
HP-4D170-S25-S06	17.0	71	152	25	56	
HP-4D175-S25-S06	17.5	73	154	25	56	
HP-4D180-S25-S06	18.0	75	156	25	56	
HP-4D185-S25-S06	18.5	77	158	25	56	
HP-4D190-S25-S06	19.0	79	160	25	56	
HP-4D195-S25-S06	19.5	81	162	25	56	
HP-4D200-S25-S06	20.0	83	164	25	56	
HP-4D205-S25-S06	20.5	85	166	25	56	
HP-4D210-S25-S06	21.0	87	168	25	56	
HP-4D215-S25-S06	21.5	89	170	25	56	
HP-4D220-S32-S07	22.0	91	181	32	60	SPMT07T308E-DP
HP-4D225-S32-S07	22.5	93	183	32	60	
HP-4D230-S32-S07	23.0	95	185	32	60	
HP-4D235-S32-S07	23.5	97	187	32	60	
HP-4D240-S32-S07	24.0	99	189	32	60	
HP-4D245-S32-S07	24.5	101	191	32	60	
HP-4D250-S32-S07	25.0	103	193	32	60	
HP-4D255-S32-S07	25.5	105	195	32	60	
HP-4D260-S32-S07	26.0	107	197	32	60	
HP-4D265-S32-S07	26.5	109	199	32	60	
HP-4D270-S32-S07	27.0	111	201	32	60	
HP-4D275-S32-S07	27.5	113	203	32	60	

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
13-15	AST2043-60	AWF-T06
15.5-21.5	AST2255-60	AWF-T06
22-27.5	AST25065-60S	AWF-T08



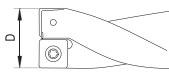


DP Series Drilling holder

Length-diameter ratio: 4D



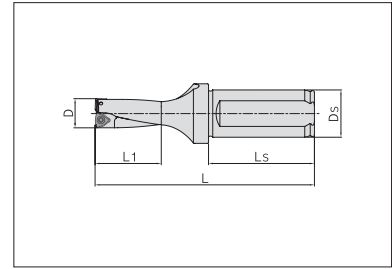
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-4D280-S32-S09	28.0	115	205	32	60	SPMT090408E-DP
HP-4D285-S32-S09	28.5	117	207	32	60	
HP-4D290-S32-S09	29.0	120	210	32	60	
HP-4D295-S32-S09	29.5	123	213	32	60	
HP-4D300-S32-S09	30.0	125	215	32	60	
HP-4D310-S32-S09	31.0	129	219	32	60	
HP-4D320-S32-S09	32.0	133	223	32	60	
HP-4D330-S32-S09	33.0	137	227	32	60	
HP-4D340-S40-S11	34.0	141	246	40	70	SPMT110408E-DP
HP-4D350-S40-S11	35.0	145	250	40	70	
HP-4D360-S40-S11	36.0	149	254	40	70	
HP-4D370-S40-S11	37.0	153	258	40	70	
HP-4D380-S40-S11	38.0	157	262	40	70	
HP-4D390-S40-S11	39.0	161	266	40	70	
HP-4D400-S40-S11	40.0	165	270	40	70	
HP-4D410-S40-S11	41.0	169	274	40	70	
HP-4D420-S40-S14	42.0	173	278	40	70	SPMT140512E-DP
HP-4D430-S40-S14	43.0	177	282	40	70	
HP-4D440-S40-S14	44.0	181	286	40	70	
HP-4D450-S40-S14	45.0	185	290	40	70	
HP-4D460-S40-S14	46.0	189	294	40	70	
HP-4D470-S40-S14	47.0	193	298	40	70	
HP-4D480-S40-S14	48.0	197	302	40	70	
HP-4D490-S40-S14	49.0	201	306	40	70	
HP-4D500-S40-S14	50.0	205	310	40	70	

Drilling holders

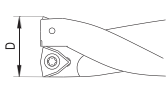


Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
28-33	AST35084-60H	AWF-T15
34-41	AST410-60H	AWF-T15
42-50	AST5126-60	AWF-T20

DG Series Drilling holder

Length-diameter ratio: 2D



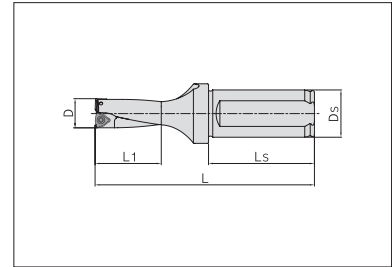
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-2D160-S25-W03	16.0	35	116	25	56	WCMT 030204E-DG
HP-2D165-S25-W03	16.5	36	117	25	56	
HP-2D170-S25-W03	17.0	37	118	25	56	
HP-2D175-S25-W03	17.5	38	119	25	56	
HP-2D180-S25-W03	18.0	39	120	25	56	
HP-2D185-S25-W03	18.5	40	121	25	56	
HP-2D190-S25-W03	19.0	41	122	25	56	
HP-2D195-S25-W03	19.5	42	123	25	56	
HP-2D200-S25-W03	20.0	43	124	25	56	
HP-2D205-S25-W04	20.5	44	125	25	56	WCMT 040204E-DG
HP-2D210-S25-W04	21.0	45	126	25	56	
HP-2D215-S25-W04	21.5	46	127	25	56	
HP-2D220-S25-W04	22.0	47	128	25	56	
HP-2D225-S25-W04	22.5	48	129	25	56	
HP-2D230-S25-W04	23.0	49	130	25	56	
HP-2D235-S25-W04	23.5	50	131	25	56	
HP-2D240-S25-W04	24.0	51	132	25	56	
HP-2D245-S25-W04	24.5	52	133	25	56	
HP-2D250-S25-W04	25.0	53	134	25	56	
HP-2D255-S32-W05	25.5	54	144	32	60	WCMT 050308E-DG
HP-2D260-S32-W05	26.0	55	145	32	60	
HP-2D265-S32-W05	26.5	56	146	32	60	
HP-2D270-S32-W05	27.0	57	147	32	60	
HP-2D275-S32-W05	27.5	58	148	32	60	
HP-2D280-S32-W05	28.0	59	149	32	60	
HP-2D285-S32-W05	28.5	60	150	32	60	
HP-2D290-S32-W05	29.0	61	151	32	60	
HP-2D295-S32-W05	29.5	62	152	32	60	
HP-2D300-S32-W05	30.0	63	153	32	60	

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
16-20	AST22045-55	AWF-T06
20.5-25	AST25055-50	AWF-T08
25.5-30	AST307-55	AWF-T08



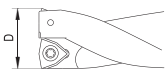


DG Series Drilling holder

Length-diameter ratio: 2D



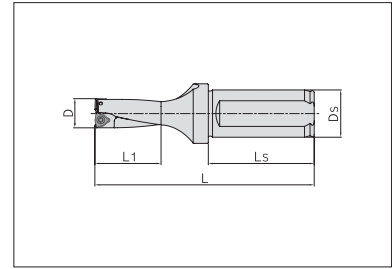
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-2D310-S32-W06	31.0	65	155	32	60	WCMT 06T308E-DG
HP-2D320-S32-W06	32.0	67	157	32	60	
HP-2D330-S32-W06	33.0	69	159	32	60	
HP-2D340-S32-W06	34.0	71	161	32	60	
HP-2D350-S32-W06	35.0	73	163	32	60	
HP-2D360-S32-W06	36.0	75	165	32	60	
HP-2D370-S32-W06	37.0	77	167	32	60	
HP-2D380-S32-W06	38.0	79	169	32	60	
HP-2D390-S32-W06	39.0	81	171	32	60	
HP-2D400-S32-W06	40.0	83	173	32	60	
HP-2D410-S32-W06	41.0	85	175	32	60	
HP-2D420-S40-W08	42.0	87	192	40	70	WCMT 080408E-DG
HP-2D430-S40-W08	43.0	89	194	40	70	
HP-2D440-S40-W08	44.0	91	196	40	70	
HP-2D450-S40-W08	45.0	93	198	40	70	
HP-2D460-S40-W08	46.0	95	200	40	70	
HP-2D470-S40-W08	47.0	97	202	40	70	
HP-2D480-S40-W08	48.0	99	204	40	70	
HP-2D490-S40-W08	49.0	101	206	40	70	
HP-2D500-S40-W08	50.0	103	208	40	70	
HP-2D510-S40-W08	51.0	105	210	40	70	
HP-2D520-S40-W08	52.0	107	212	40	70	
HP-2D530-S40-W08	53.0	109	214	40	70	
HP-2D540-S40-W08	54.0	111	216	40	70	
HP-2D550-S40-W08	55.0	113	218	40	70	
HP-2D560-S40-W08	56.0	115	220	40	70	
HP-2D570-S40-W08	57.0	117	222	40	70	
HP-2D580-S40-W08	58.0	119	224	40	70	

Drilling holders

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
31-41	AST3509-55	AWF-T15
42-58	AST411-60W-M	AWF-T15

DG Series Drilling holder

Length-diameter ratio: 3D



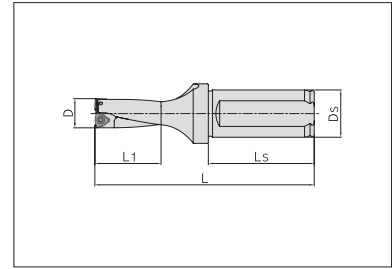
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-3D160-S25-W03	16.0	51	132	25	56	WCMT 030204E-DG
HP-3D165-S25-W03	16.5	53	134	25	56	
HP-3D170-S25-W03	17.0	54	135	25	56	
HP-3D175-S25-W03	17.5	56	137	25	56	
HP-3D180-S25-W03	18.0	57	138	25	56	
HP-3D185-S25-W03	18.5	59	140	25	56	
HP-3D190-S25-W03	19.0	60	141	25	56	
HP-3D195-S25-W03	19.5	62	143	25	56	
HP-3D200-S25-W03	20.0	63	144	25	56	
HP-3D205-S25-W04	20.5	65	146	25	56	WCMT 040204E-DG
HP-3D210-S25-W04	21.0	66	147	25	56	
HP-3D215-S25-W04	21.5	68	149	25	56	
HP-3D220-S25-W04	22.0	69	150	25	56	
HP-3D225-S25-W04	22.5	71	152	25	56	
HP-3D230-S25-W04	23.0	72	153	25	56	
HP-3D235-S25-W04	23.5	74	155	25	56	
HP-3D240-S25-W04	24.0	75	156	25	56	
HP-3D245-S25-W04	24.5	77	158	25	56	
HP-3D250-S25-W04	25.0	78	159	25	56	
HP-3D255-S32-W05	25.5	80	170	32	60	WCMT 050308E-DG
HP-3D260-S32-W05	26.0	81	171	32	60	
HP-3D265-S32-W05	26.5	83	173	32	60	
HP-3D270-S32-W05	27.0	84	174	32	60	
HP-3D275-S32-W05	27.5	86	176	32	60	
HP-3D280-S32-W05	28.0	87	177	32	60	
HP-3D285-S32-W05	28.5	89	179	32	60	
HP-3D290-S32-W05	29.0	90	180	32	60	
HP-3D295-S32-W05	29.5	92	182	32	60	
HP-3D300-S32-W05	30.0	93	183	32	60	

Dimensions (mm)	Spare parts	
	Screw	Wrench
Holder diameter		
16-20	AST22045-55	AWF-T06
20.5-25	AST25055-50	AWF-T08
25.5-30	AST307-55	AWF-T08



DG Series Drilling holder

Length-diameter ratio: 3D



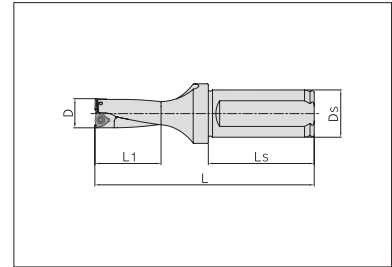
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-3D310-S32-W06	31.0	96	186	32	60	WCMT 06T308E-DG
HP-3D320-S32-W06	32.0	99	189	32	60	
HP-3D330-S32-W06	33.0	102	192	32	60	
HP-3D340-S32-W06	34.0	105	195	32	60	
HP-3D350-S32-W06	35.0	108	198	32	60	
HP-3D360-S32-W06	36.0	111	201	32	60	
HP-3D370-S32-W06	37.0	114	204	32	60	
HP-3D380-S32-W06	38.0	117	207	32	60	
HP-3D390-S32-W06	39.0	120	210	32	60	
HP-3D400-S32-W06	40.0	123	213	32	60	
HP-3D410-S32-W06	41.0	126	216	32	60	
HP-3D420-S40-W08	42.0	129	234	40	70	WCMT 080408E-DG
HP-3D430-S40-W08	43.0	132	237	40	70	
HP-3D440-S40-W08	44.0	135	240	40	70	
HP-3D450-S40-W08	45.0	138	243	40	70	
HP-3D460-S40-W08	46.0	141	246	40	70	
HP-3D470-S40-W08	47.0	144	249	40	70	
HP-3D480-S40-W08	48.0	147	252	40	70	
HP-3D490-S40-W08	49.0	150	255	40	70	
HP-3D500-S40-W08	50.0	153	258	40	70	
HP-3D510-S40-W08	51.0	156	261	40	70	
HP-3D520-S40-W08	52.0	159	264	40	70	
HP-3D530-S40-W08	53.0	162	267	40	70	
HP-3D540-S40-W08	54.0	165	270	40	70	
HP-3D550-S40-W08	55.0	168	273	40	70	
HP-3D560-S40-W08	56.0	171	276	40	70	
HP-3D570-S40-W08	57.0	174	279	40	70	
HP-3D580-S40-W08	58.0	177	282	40	70	

Drilling holders

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
31-41	AST3509-55	AWF-T15
42-58	AST411-60W-M	AWF-T15

DG Series Drilling holder

Length-diameter ratio: 4D



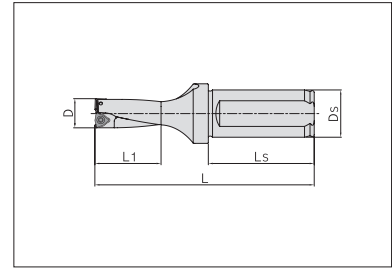
Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-4D160-S25-W03	16.0	67	148	25	56	WCMT 030204E-DG
HP-4D165-S25-W03	16.5	69	150	25	56	
HP-4D170-S25-W03	17.0	71	152	25	56	
HP-4D175-S25-W03	17.5	73	154	25	56	
HP-4D180-S25-W03	18.0	75	156	25	56	
HP-4D185-S25-W03	18.5	77	158	25	56	
HP-4D190-S25-W03	19.0	79	160	25	56	
HP-4D195-S25-W03	19.5	81	162	25	56	
HP-4D200-S25-W03	20.0	83	164	25	56	
HP-4D205-S25-W04	20.5	85	166	25	56	WCMT 040204E-DG
HP-4D210-S25-W04	21.0	87	168	25	56	
HP-4D215-S25-W04	21.5	89	170	25	56	
HP-4D220-S25-W04	22.0	91	172	25	56	
HP-4D225-S25-W04	22.5	93	174	25	56	
HP-4D230-S25-W04	23.0	95	176	25	56	
HP-4D235-S25-W04	23.5	97	178	25	56	
HP-4D240-S25-W04	24.0	99	180	25	56	
HP-4D245-S25-W04	24.5	101	182	25	56	
HP-4D250-S25-W04	25.0	103	184	25	56	
HP-4D255-S32-W05	25.5	105	195	32	60	WCMT 050308E-DG
HP-4D260-S32-W05	26.0	107	197	32	60	
HP-4D265-S32-W05	26.5	109	199	32	60	
HP-4D270-S32-W05	27.0	111	201	32	60	
HP-4D275-S32-W05	27.5	113	203	32	60	
HP-4D280-S32-W05	28.0	115	205	32	60	
HP-4D285-S32-W05	28.5	117	207	32	60	
HP-4D290-S32-W05	29.0	119	209	32	60	
HP-4D295-S32-W05	29.5	121	211	32	60	
HP-4D300-S32-W05	30.0	123	213	32	60	

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
16-20	AST22045-55	AWF-T06
20.5-25	AST25055-50	AWF-T08
25.5-30	AST307-55	AWF-T08



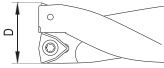


DG Series Drilling holder

Length-diameter ratio: 4D

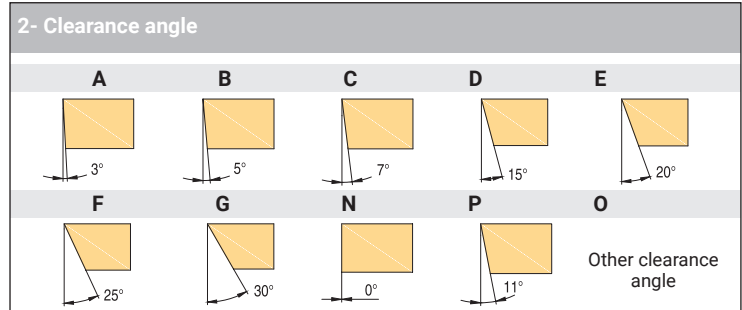
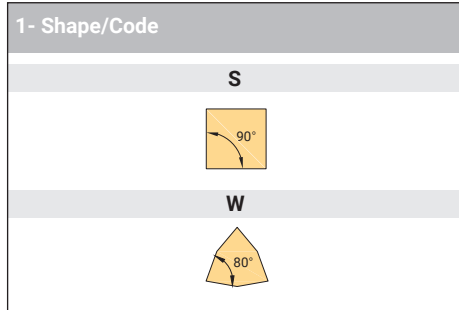


Product code	Dimension(mm)					Inserts
	D	L ₁	L	D _s	L _s	
HP-4D310-S32-W06	31.0	127	217	32	60	WCMT 06T308E-DG
HP-4D320-S32-W06	32.0	131	221	32	60	
HP-4D330-S32-W06	33.0	135	225	32	60	
HP-4D340-S32-W06	34.0	139	229	32	60	
HP-4D350-S32-W06	35.0	143	233	32	60	
HP-4D360-S32-W06	36.0	147	237	32	60	
HP-4D370-S32-W06	37.0	151	241	32	60	
HP-4D380-S32-W06	38.0	155	245	32	60	
HP-4D390-S32-W06	39.0	159	249	32	60	
HP-4D400-S32-W06	40.0	163	253	32	60	
HP-4D410-S32-W06	41.0	167	257	32	60	
HP-4D420-S40-W08	42.0	171	276	40	70	WCMT 080408E-DG
HP-4D430-S40-W08	43.0	175	280	40	70	
HP-4D440-S40-W08	44.0	179	284	40	70	
HP-4D450-S40-W08	45.0	183	288	40	70	
HP-4D460-S40-W08	46.0	187	292	40	70	
HP-4D470-S40-W08	47.0	191	296	40	70	
HP-4D480-S40-W08	48.0	195	300	40	70	
HP-4D490-S40-W08	49.0	199	304	40	70	
HP-4D500-S40-W08	50.0	203	308	40	70	
HP-4D510-S40-W08	51.0	207	312	40	70	
HP-4D520-S40-W08	52.0	211	316	40	70	
HP-4D530-S40-W08	53.0	215	320	40	70	
HP-4D540-S40-W08	54.0	219	324	40	70	
HP-4D550-S40-W08	55.0	223	328	40	70	
HP-4D560-S40-W08	56.0	227	332	40	70	
HP-4D570-S40-W08	57.0	231	336	40	70	
HP-4D580-S40-W08	58.0	235	340	40	70	

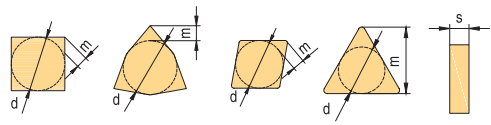
Drilling holders

Dimensions (mm)	Spare parts	
Holder diameter	Screw	Wrench
		
31-41	AST3509-55	AWF-T15
42-58	AST411-60W-M	AWF-T15

Drilling Insert Denomination System



3- Tolerance



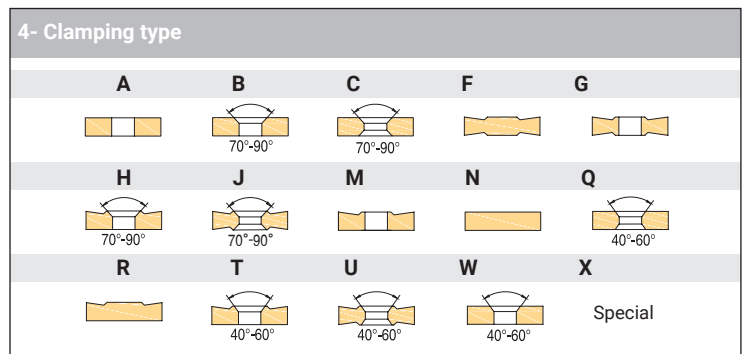
Class	Unit	In. Circle dimension d	Nose height m	Thickness s
A	mm	± 0,025	± 0,005	± 0,025
C	mm	± 0,025	± 0,013	± 0,025
E	mm	± 0,025	± 0,025	± 0,025
F	mm	± 0,013	± 0,005	± 0,025
G	mm	± 0,025	± 0,025	± 0,13
H	mm	± 0,013	± 0,013	± 0,025
J	mm	*	± 0,005	± 0,025
K	mm	*	± 0,013	± 0,025
L	mm	*	± 0,025	± 0,025
M	mm	*	*	± 0,127
U	mm	*	*	± 0,127
N	mm	*	*	± 0,025

* For details refer to right and below tables

Shape: C, E, H, M, O, P, S, T, R, W

IC	d		m	
	J,K,L,M,N	U	M, N	U
4.76	± 0,05	± 0,08	± 0,08	± 0,13
5.56	± 0,05	± 0,08	± 0,08	± 0,13
6	± 0,05	± 0,08	± 0,08	± 0,13
6.35	± 0,05	± 0,08	± 0,08	± 0,13
7.94	± 0,05	± 0,08	± 0,08	± 0,13
8	± 0,05	± 0,08	± 0,08	± 0,13
9.525	± 0,05	± 0,08	± 0,08	± 0,13
10	± 0,05	± 0,08	± 0,08	± 0,13
12	± 0,08	± 0,13	± 0,13	± 0,2
12.7	± 0,08	± 0,13	± 0,13	± 0,2
15.875	± 0,1	± 0,18	± 0,15	± 0,27
16	± 0,1	± 0,18	± 0,15	± 0,27
19.05	± 0,1	± 0,18	± 0,15	± 0,27
20	± 0,1	± 0,18	± 0,15	± 0,27
25	± 0,13	± 0,25	± 0,18	± 0,38
25.4	± 0,13	± 0,25	± 0,18	± 0,38
31.75	± 0,15	± 0,25	± 0,2	± 0,38
32	± 0,15	± 0,25	± 0,2	± 0,38

M&N shape	D shape		V shape	
	d	m	d	m
5.56	± 0,05	± 0,11		
6.35	± 0,05	± 0,11	± 0,05	± 0,16
7.94	± 0,05	± 0,11	± 0,05	± 0,16
9.525	± 0,05	± 0,11	± 0,05	± 0,16
12.7	± 0,08	± 0,15	± 0,08	± 0,2
15.875	± 0,10	± 0,18	± 0,10	± 0,27
19.05	± 0,10	± 0,18	± 0,10	± 0,27



06
5

02
6

04
7

E
8


-
-

DP
9

5- Cutting edge length				
In.Circle Dimension (mm)	S Code	S Length	W Code	W Length
5.56			03	3.8
6.35	06	6.35	04	4.3
7.94			05	5.4
8.0	08	8.0		
9.525	09	9.525	06	6.5
12.7	12	12.7	08	8.7

7- Corner radius		
Example		
04	=	0.4
08	=	0.8
12	=	1.2

8- Cutting edge shape	
Example	Illustration
E	Honed cutting edge
F	Sharp cutting edge
T	Negative land

6- Insert thickness		
Thickness illustration	Thickness mark	Example
		00 = 0.79
		T0 = 0.99
		01 = 1.59
		T1 = 1.98
		02 = 2.38
		T2 = 2.58
		03 = 3.18
		T3 = 3.97
		04 = 4.76
		T4 = 4.96
		05 = 5.56
		T5 = 5.95
		06 = 6.35
		07 = 7.94
		09 = 9.53
		11 = 11.11
		12 = 12.70
		14 = 14.29
		15 = 15.88

Insert thickness "S" refers to the distance between cutting edge nose and bottom

9- Chip breaker code	
DP	DU/DG
	

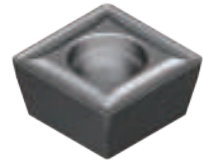
10. Chip breakers' information refer to page 298

Drilling inserts

Geometry Application Guide

DP

1. DP geometry has high efficiency. Suitable for short hole high speed drilling.
2. Strong square insert with reinforced geometry offers excellent hole straightness.
3. Drilling holder with helical flute provides excellent chip evacuation and high hole precision.



DU/DG

1. Suitable cutting angle makes perfect balance for the cutting force.
2. General purpose geometry combined with two grades are suitable for PM,K,S materials, especially good for the chip control in soft materials.
3. Obtains good surface finish.
4. Good versatility. It's suitable for rotating and non-rotating machining.



Grade Application Guide

Drilling insert grade ISO group								
Material Group	Materials	ISO	AP301U	AP351U	AP351M	AC301P	ISO	
P	Unalloy steels / Alloyed steels	P01					P01	
		P05					P05	
		P10					P10	
		P15	AP301U					P15
		P20					P20	
		P25				AP351M	AC301P	P25
		P30						P30
		P35		AP351U				P35
		P40					P40	
		P45						P45
		P50						P50
M	Stainless steels	M01					M01	
		M05					M05	
		M10					M10	
		M15	AP301U					M15
		M20					M20	
		M25			AP351M			M25
		M30		AP351U				M30
		M35						M35
		M40					M40	
M45					M45			
K	Cast iron	K01					K01	
		K05					K05	
		K10					K10	
		K15					K15	
		K20					K20	
		K25					K25	
		K30					K30	
		K35					K35	
		K40					K40	
		K45					K45	
S	Heat resistant alloys	S01					S01	
		S05					S05	
		S10					S10	
		S15					S15	
		S20					S20	
		S25			AP351M			S25
		S30		AP351U				S30
		S35						S35
		S40					S40	
		S45					S45	
N	Aluminum/ Aluminum alloys	N01					N01	
		N05					N05	
		N10					N10	
		N15					N15	
		N20					N20	
		N25					N25	
		N30					N30	
H	Hardened steels/ Chilled cast iron	H01					H01	
		H05					H05	
		H10					H10	
		H15					H15	
		H20					H20	
		H25					H25	
H30					H30			

Drilling inserts

Grade Application Guide

Materials				PVD coated			CVD coated
				AP301U	AP351U	AP351M	AC301P
ISO	Material classification	Tensile strength (N/mm ²)	Hardness (HB)	Priority			
P	Unalloyed steel	<600	<180	●	●	●	●
		<950	<280	●	●	●	●
	Alloyed steel	700-950	200-280	●	●	●	●
		950-1200	280-355	●	●	●	●
		1200-1400	355-415	●	●	●	●
M	Duplex stainless steel	778	230	◐	●	●	-
	Austenitic stainless steel	675	200	◐	●	●	-
	Precipitation-hardening stainless steel	1013	300	◐	●	●	-
K	Grey cast iron	700	220	-	-	-	-
	Nodular cast iron	880	260	-	-	-	-
	Malleable cast iron	800	250	-	-	-	-
S	Fe-based alloy	943	280	-	◐	●	-
	Co-based alloy	1076	320	-	◐	●	-
	Ni-based alloy	1177	350	-	◐	●	-
	Ti-alloy	1262	370	-	◐	●	-
N	Aluminum	260	75	-	-	-	-
	Aluminum alloy	447	130	-	-	-	-
H	Hardened steel	-	50-60HRC	-	-	-	-
	Chilled cast iron	-	55HRC	-	-	-	-

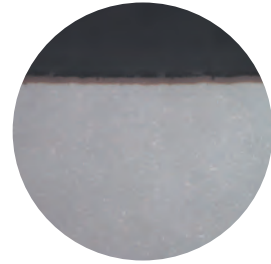
- Best choice
- ◐ 2nd choice
- Inapplicable

Drilling Grade Description

AP301U

Coating: PVD coating

Suitable for steel, stainless steel drilling. High strength and wear resistance ultra fine carbide substrate with nanostructured PVD coating in controllable layer, high coating adhesion, wear-resistance and strength.



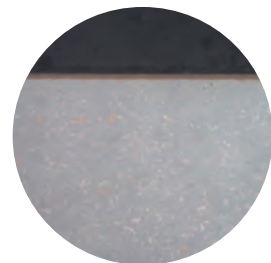
Application range												
ISO Classification	01	05	10	15	20	25	30	35	40	45	50	
P				AP301U								
M				AP301U								
K												
S												
N												
H												

Remark: Best choice
 2nd choice

AP351U

Coating: PVD coating

Suitable for steel, stainless steel and heat resistant alloy drilling. High strength carbide substrate with nanostructured PVD coating in controllable layer, high coating adhesion, wear-resistance and strength.



Application range												
ISO Classification	01	05	10	15	20	25	30	35	40	45	50	
P							AP351U					
M							AP351U					
K												
S							AP351U					
N												
H												

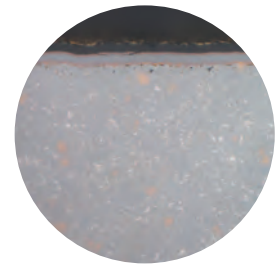
Remark: Best choice
 2nd choice

Drilling inserts

AC301P

Coating: CVD coating

For steel and cast iron drilling. High strength substrate combined with multi-layer CVD, good coating adhesion and strength.



Application range											
ISO Classification	01	05	10	15	20	25	30	35	40	45	50
P						AC301P					
M											
K											
S											
N											
H											

Remark: Best choice
 2nd choice

AP351M

Coating: PVD coating

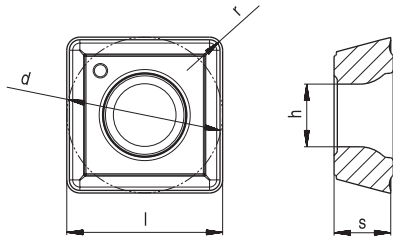
Suitable for steel, stainless steel and heat resistant alloy drilling. Good stability and wear resistance. Good thermal crack resistance and high coating adhesion and strength.

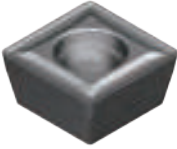


Application range											
ISO Classification	01	05	10	15	20	25	30	35	40	45	50
P						AP351M					
M						AP351M					
K											
S						AP351M					
N											
H											

Remark: Best choice
 2nd choice

SPMT-DP Drilling Insert

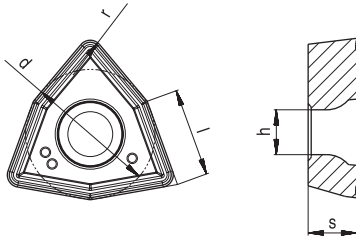



Inserts	Product code	Dimension(mm)					Grades								
		l	d	s	r	h	AP301U	AP351U	AC301P	AP351M	AP401U	AP351K	AC301K	AW100K	AP403S
	SPMT 050204E-DP	5	5	2.38	0.4	2.25	●	●	●	●					
	SPMT 060204E-DP	6	6	2.38	0.4	2.61	●	●	●	●					
	SPMT 07T308E-DP	7.94	7.94	3.97	0.8	2.85	●	●	●	●					
	SPMT 090408E-DP	9.8	9.8	4.3	0.8	4.05	●	●	●	●					
	SPMT 110408E-DP	11.5	11.5	4.8	0.8	4.45	●	●	●	●					
	SPMT 140512E-DP	14.3	14.3	5.2	1.2	5.75	●	●	●	●					

Marked : ● Stock available

Drilling inserts

WCMT-DU Drilling Insert

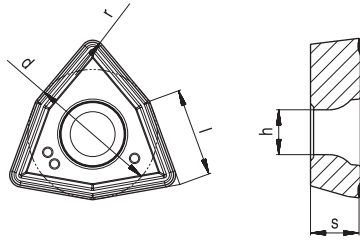



Inserts	Product code	Dimension(mm)					Grades									
		l	d	s	r	h	AP301U	AP351U	AC301P	AP351M	AP401U	AP351K	AC301K	AW100K	AP403S	
	WCMT 030208E-DU	3.8	5.56	2.38	0.8	2.8	●	●								
	WCMT 040208E-DU	4.3	6.35	2.38	0.8	3.0	●	●								
	WCMT 050308E-DU	5.4	7.94	3.18	0.8	3.4	●	●								
	WCMT 06T308E-DU	6.5	9.525	3.97	0.8	3.9	●	●								
	WCMT 080412E-DU	8.7	12.7	4.76	1.2	4.4	●	●								

Note: The DU insert is a universal insert and Achteck does not provide a tool holder.

Marked : ● Stock available

WCMT-DG Drilling Insert



Inserts	Product code	Dimension(mm)					Grades									
		l	d	s	r	h	AP301U	AP351U	AC301P	AP351M	AP401U	AP351K	AC301K	AW100K	AP403S	
	WCMT 030204E-DG	3.8	5.56	2.38	0.4	2.5	●	●								
	WCMT 040204E-DG	4.3	6.35	2.38	0.4	2.8	●	●								
	WCMT 050308E-DG	5.4	7.94	3.18	0.8	3.4	●	●								
	WCMT 06T308E-DG	6.5	9.525	3.97	0.8	4.45	●	●								
	WCMT 080408E-DG	8.7	12.7	4.76	0.8	5.5	●	●								

Marked : ● Stock available

Drilling inserts

Cutting Parameter Recommendation

Materials		SP drilling insert series grade application range & cutting parameter recommendation																				
		Grade				Feed (mm/rev)																
ISO	Material classification	Tensile strength (N/mm ²)	Hardness (HB)	Cutting speed (m/min)										Feed (mm/rev)								
				Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Med	Max				
P	Unalloyed steel	<600	<180	260	240	224	220	185	150	240	220	200	200	175	150	0.05-0.08	0.06-0.10	0.06-0.12	0.07-0.13	0.08-0.15	0.08-0.16	
		<950	<280	250	210	170	200	170	140	230	190	160	190	162.5	135	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25	
		700-950	200-280	240	200	160	190	160	130	220	180	150	180	150	120	0.06-0.10	0.08-0.14	0.10-0.18	0.12-0.22	0.12-0.23	0.13-0.24	
		950-1200	280-355	210	170	130	170	130	90	190	150	110	160	130	100	0.06-0.12	0.08-0.15	0.10-0.18	0.12-0.22	0.12-0.24	0.13-0.25	
M	Alloyed steel	1200-1400	355-415	170	140	110	160	120	80	150	120	90	140	110	80	0.06-0.10	0.08-0.14	0.10-0.18	0.12-0.22	0.12-0.23	0.13-0.24	
		Duplex stainless steel	778	230	260	200	140	180	135	90	240	180	120	-	-	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18	
K	Austenitic stainless steel	675	200	220	170	120	120	65	60	200	150	100	-	-	-	0.05-0.10	0.06-0.12	0.08-0.15	0.09-0.16	0.10-0.17	0.11-0.18	
		Precipitation-hardening stainless steel	1013	300	180	140	100	90	65	40	160	120	80	-	-	-	-	-	-	-	-	-
		Grey cast iron	700	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	Nodular cast iron	880	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		Malleable cast iron	800	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Fe-based alloy	943	280	-	-	40	30	20	45	35	25	-	-	-	-	-	-	-	-	-	-
		Co-based alloy	1076	320	-	-	35	25	15	40	30	20	-	-	-	-	-	-	-	-	-	-
		Ni-based alloy	1177	350	-	-	35	25	15	40	30	20	-	-	-	-	-	-	-	-	-	-
N	Ti-alloy	1262	370	-	-	40	30	20	45	35	25	-	-	-	0.05-0.10	0.06-0.14	0.08-0.18	0.10-0.22	0.14-0.23	0.15-0.24		
		Aluminum	260	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
H	Aluminum alloy	447	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Hardened steel	-	50-60HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
H	Chilled cast iron	-	55HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolants.

Cutting Parameter Recommendation

Materials		WC drilling insert series grade application range & cutting parameter recommendation																	
		AP301U	AP351U	AC301P	Feed (mm/rev)														
ISO	Material classification	Tensile strength (N/mm ²)	Hardness (HB)	Cutting speed (m/min)			Feed (mm/rev)												
				Min	Med	Max	Min	Med	Max	Min	Med	Max	Min	Med	Max				
P	Unalloyed steel	<600	<180	260	240	224	220	185	150	150	200	175	150	0.04-0.065	0.07-0.09	0.07-0.10	0.08-0.11	0.08-0.11	0.09-0.13
		<950	<280	250	210	170	200	170	140	190	162.5	135	0.05-0.07	0.09-0.09	0.07-0.10	0.08-0.11	0.08-0.11	0.09-0.13	
		700-950	200-280	240	200	160	190	160	130	180	150	120	0.05-0.09	0.065-0.14	0.08-0.16	0.10-0.18	0.10-0.20	0.10-0.20	
		950-1200	280-355	210	170	130	170	130	90	160	130	100	0.04-0.07	0.065-0.11	0.07-0.14	0.09-0.15	0.10-0.18	0.10-0.18	
		1200-1400	355-415	170	140	110	160	120	80	140	110	80	0.04-0.065	0.05-0.9	0.07-0.10	0.08-0.12	0.09-0.13	0.09-0.13	
M	Duplex stainless steel	778	230	260	200	140	180	135	90	-	-	-	0.04-0.07	0.065-0.11	0.08-0.14	0.08-0.11	0.08-0.11	0.09-0.13	
		675	200	220	170	120	65	60	-	-	-	0.04-0.065	0.065-0.10	0.08-0.12	0.08-0.10	0.08-0.10	0.08-0.11		
		1013	300	180	140	100	65	40	-	-	-	-	-	-	-	-	-	-	
K	Grey cast iron	700	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		880	260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		800	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S	Fe-based alloy	943	280	-	-	-	40	30	20	-	-	-	-	-	-	-	-	-	-
		1076	320	-	-	-	35	25	15	-	-	-	-	-	-	-	-	-	-
		1177	350	-	-	-	35	25	15	-	-	-	-	-	-	-	-	-	-
		1262	370	-	-	-	40	30	20	-	-	-	-	0.06-0.11	0.07-0.12	0.08-0.13	0.08-0.13	0.08-0.14	
N	Aluminum	260	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		447	130	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
H	Hardened steel	-	50-60HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		-	55HRC	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*The recommended cutting conditions always refer to general conditions. These cutting conditions should be adjusted according to the practical machine rigidity, tools, workpiece clamping and coolants.



Deep-hole Drilling Product Introduction

Achteck has launched general-purpose deep-hole drilling inserts, which offer high productivity for many industries: energy, engineering machinery, injection molding, aircraft, shipbuilding, military, etc. It can achieve good hole straightness in deep hole drilling and good surface finish. Existing geometries and grades cover steel, stainless steel and heat resistant alloy drilling.

Product application and features

- The inserts can be mounted on the deep-hole drilling head.
- AP301U(N) is the first choice for drilling steel and stainless steel
- All geometries offer good chip-breaking result
- Increased efficiency due to high feed rate
- Reduces the cost per hole

Grade and Application

Grade	Coating	Workpiece material					
		P	M	K	S	N	H
AP301U(M)	PVD	●	●		○		




● Marked: 1st Choice ● Marked: 2nd Choice ○ Marked: Supplementary application

ISO P : (P15-P35) General-purpose PVD coating with excellent wear-resistance and toughness.

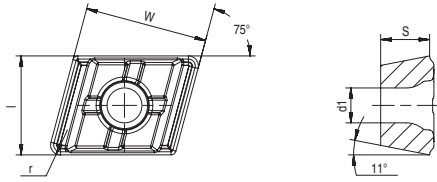
ISO M :(M15-M35) General-purpose grade for ISO-M applications, PVD coating with excellent toughness and resistance to built-up edges.

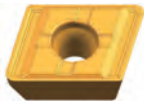
ISO S :(S15-S35) PVD coating with excellent wear resistance and toughness, good resistance to built-up edges.

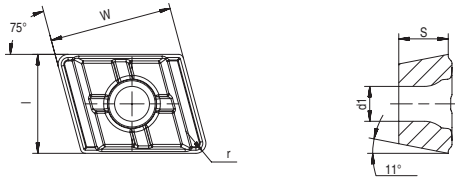
Geometry Types and Features

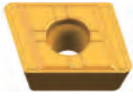
Geometry	Edge shape	Application
DH		<ul style="list-style-type: none"> • For general purpose. • Suitable for high cutting speed and feed. • Good chip control in most of materials.
DL		<ul style="list-style-type: none"> • Suitable for long chip materials (such as low carbon alloy steel and duplex stainless steel). • Obtain a reliable production process in drilling materials where chip jamming can be a problem.
LH		<ul style="list-style-type: none"> • With open geometry; • Suitable for high cutting speed and feed.

DH Geometry



Center insert	Product code	l	w	s	r	d1	Competitor's description	Stock
	EPMT 050308C-DH AP301U(N)	5.56	8	3.18	0.8	2.5	800-050308M-C-G 1025	●
	EPMT 06T308C-DH AP301U(N)	6.35	9.87	3.97	0.8	2.8	800-06T308M-C-G 1025	●
	EPMT 08T308C-DH AP301U(N)	7.94	9.87	3.97	0.8	2.8	800-08T308M-C-G 1025	●
	EPMT 10T308C-DH AP301U(N)	9.53	9.87	3.97	0.8	2.8	800-10T308M-C-G 1025	●
	EPMT 12T308C-DH AP301U(N)	12.7	9.87	3.97	0.8	2.8	800-12T308M-C-G 1025	●

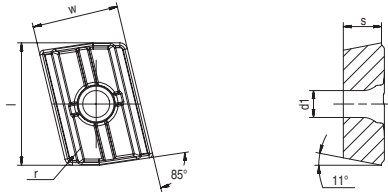


Intermediate insert	Product code	l	w	s	r	d1	Competitor's description	Stock
	EPMT 050308I-DH AP301U(N)	5.56	8	3.18	0.8	2.5	800-050308M-I-G 1025	●
	EPMT 06T308I-DH AP301U(N)	6.35	9.87	3.97	0.8	2.8	800-06T308M-I-G 1025	●
	EPMT 08T308I-DH AP301U(N)	7.94	9.87	3.97	0.8	2.8	800-08T308M-I-G 1025	●
	EPMT 12T308I-DH AP301U(N)	12.7	9.87	3.97	0.8	2.8	800-12T308M-I-G 1025	●

Marked : ● Stock available

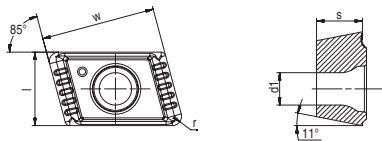
Drilling inserts

DH Geometry

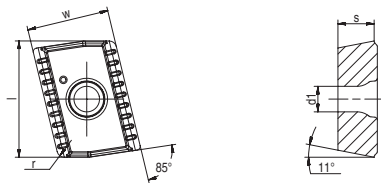


Periphery insert	Product code	l	w	s	r	d1	Competitor's description	Stock
	APHT 060308P-DH AP301U(N)	6.5	8	3.18	0.8	2.5	800-060308H-P-G 1025	●
	APHT 08T308P-DH AP301U(N)	8.5	9	3.97	0.8	2.8	800-08T308H-P-G 1025	●
	APHT 09T308P-DH AP301U(N)	9.66	9	3.97	0.8	2.8	800-09T308H-P-G 1025	●
	APHT 11T308P-DH AP301U(N)	12.75	9	3.97	0.8	2.8	800-11T308H-P-G 1025	●

DL Geometry



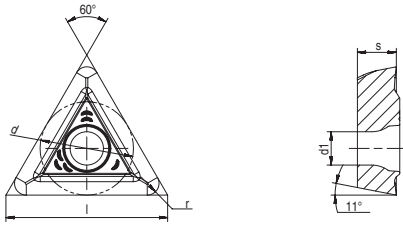
Intermediate insert	Product code	l	w	s	r	d1	Competitor's description	Stock
	EPMT 050308I-DL AP301U(N)	5.56	8	3.18	0.8	2.5	800-050308M-I-L 1025	●
	EPMT 06T308I-DL AP301U(N)	6.35	9.87	3.97	0.8	2.8	800-06T308M-I-L 1025	●
	EPMT 08T308I-DL AP301U(N)	7.94	9.87	3.97	0.8	2.8	800-08T308M-I-L 1025	●
	EPMT 12T308I-DL AP301U(N)	12.7	9.87	3.97	0.8	2.8	800-12T308M-I-L 1025	●

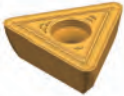


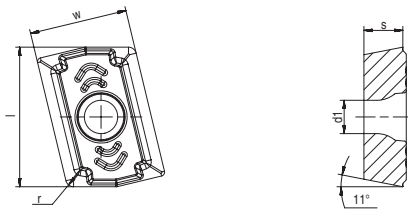
Periphery insert	Product code	l	w	s	r	d1	Competitor's description	Stock
	APHT 060308P-DL AP301U(N)	6.5	8	3.18	0.8	2.5	800-060308H-P-L 1025	●
	APHT 08T308P-DL AP301U(N)	8.5	9	3.97	0.8	2.8	800-08T308H-P-L 1025	●
	APHT 09T308P-DL AP301U(N)	9.66	9	3.97	0.8	2.8	800-09T308H-P-L 1025	●
	APHT 11T308P-DL AP301U(N)	12.75	9	3.97	0.8	2.8	800-11T308H-P-L 1025	●

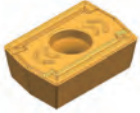
Marked : ● Stock available

DH Geometry



Center/Intermediate insert	Product code	l	d	s	r	d1	Competitor's description	Stock
	TPMT 16T312R-DH AP301U(N)	16.5	9.525	3.97	1.2	3.4	TPMT 16T308R-23 1025	●
	TPMT 220612R-DH AP301U(N)	22	12.7	6.35	1.2	4.4	TPMT 220612R-23 1025	●

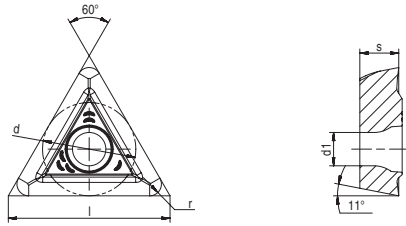


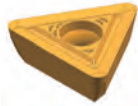
Periphery insert	Product code	l	d	s	r	d1	Competitor's description	Stock
	APMT 13T308-DH AP301U(N)	14.6	10	3.97	0.8	3.4	R424.9-13T308-23 1025	●
	APMT 180608-DH AP301U(N)	20.6	11.5	6.35	0.8	4.4	R424.9-180608-23 1025	●

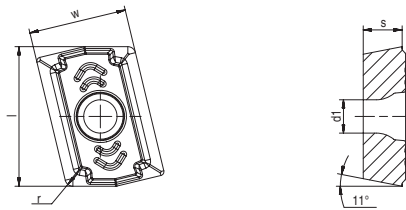
Marked : ● Stock available

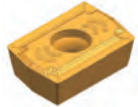
Drilling inserts

LH Geometry



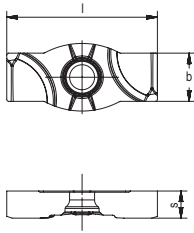
Center/Intermediate insert	Product code	l	d	s	r	d1	Competitor's description	Stock
	TPMT 16T312R-LH AP301U(N)	16.5	9.525	3.97	1.2	3.4	TPMT 16T308R-22 1025	●
	TPMT 220612R-LH AP301U(N)	22	12.7	6.35	1.2	4.4	TPMT 220612R-22 1025	●




Periphery insert	Product code	l	d	s	r	d1	Competitor's description	Stock
	APMT 13T308-LH AP301U(N)	14.6	10	3.97	0.8	3.4	R424.9-13T308-22 1025	●
	APMT 180608-LH AP301U(N)	20.6	11.5	6.35	0.8	4.4	R424.9-180608-22 1025	●

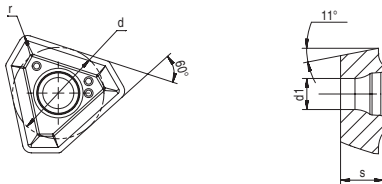
Marked : ● Stock available


Guiding Pad



Guiding pad	Product code	b	l	s	Competitor's description	Stock
	GPAD-06A AC301K	6.00	18.00	3.00	800-06A PM1	●
	GPAD-07A AC301K	6.90	20.00	3.50	800-07A PM1	●
	GPAD-08A AC301K	8.00	25.00	4.50	800-08A PM1	●
	GPAD-10A AC301K	10.00	30.00	4.50	800-10A PM1	●
	GPAD-12A AC301K	12.00	35.00	5.50	800-12A PM1	●

TPMX Series



Sharp	Product code	s	d	r	d1	Competitor's description	Stock
	TPMX 1403R-DH AP301U(N)	3.50	8.45	0.80	2.87	TPMX 1403RG TT9030	●
	TPMX 1704R-DH AP301U(N)	4.00	10.30	0.80	3.90	TPMX 1704RG TT9030	●
	TPMX 2405R-DH AP301U(N)	5.50	14.20	1.20	4.40	TPMX 2405RG TT9030	●
	TPMX 2405L-DH AP301U(N)	5.50	14.20	1.20	4.40	TPMX 2405LG TT9030	●
	TPMX 2807R-DH AP301U(N)	7.50	17.00	1.60	5.50	TPMX 2807RG TT9030	●

Marked : ● Stock available

Drilling inserts

Recommended Cutting Speed for Materials(Dia 25.00-65.00mm)

	Workpiece material		Brinell hardness (HB)	Grade			Cutting speed Vc m/min	Feed fn mm/r	
				Insert				Drilling dia mm	
				P	I	C		25.00-43.00	43.01-65.00
P	Unalloyed steel	C=0.05-0.10%	125	AP301U(N)			70-130	0.11-0.41	0.14-0.45
		C=0.10-0.25%	125				70-130	0.11-0.41	0.14-0.45
		C=0.25-0.55%	150				70-130	0.11-0.41	0.14-0.45
		C=0.55-0.80%	170				70-130	0.11-0.41	0.14-0.45
	High carbon steel	Carbon tool steel	210	AP301U(N)			70-120	0.11-0.41	0.20-0.45
	Low-alloyed steel	Non-Hardened	180	AP301U(N)			55-110	0.11-0.41	0.20-0.45
		Tempered	275				70-120	0.11-0.41	0.20-0.45
		Tempered	350				70-120	0.11-0.41	0.20-0.45
	High-alloyed steel	Annealed	200	AP301U(N)			55-110	0.11-0.38	0.20-0.40
		Hardened tool steel	325				55-110	0.20-0.38	0.20-0.40
Cast steel	Non-alloyed steel	180	AP301U(N)			55-110	0.11-0.41	0.20-0.45	
	Low-alloy (alloy<5%)	200				55-110	0.11-0.41	0.20-0.45	
M	Stainless steel	Non-Hardened/Ferritic/martensitic	200	AP301U(N)			40-110	0.11-0.41	0.20-0.45
		Austenitic	200				40-110	0.11-0.41	0.20-0.45
		Austenitic, precipitation hardened (PH)	300				40-110	0.11-0.33	0.20-0.35
		Austenitic/ferritic, duplex	230				40-80	0.11-0.33	0.20-0.35
K	Malleable cast iron	Ferritic	200	AP301U(N)			80-120	0.11-0.38	0.24-0.41
		Pearlitic	260				80-120	0.11-0.38	0.24-0.41
	Grey cast iron	Low tensile strength	180	AP301U(N)			60-110	0.11-0.38	0.24-0.41
		High tensile strength	245				60-110	0.11-0.38	0.24-0.41
	Nodular cast iron	Ferritic	160	AP301U(N)			50-110	0.11-0.38	0.24-0.41
		Pearlitic	250				50-110	0.11-0.38	0.24-0.41
GGV (CGI)		230							
N	Wrought aluminium alloys	non-aging	30	AP301U(N)			65-150	0.09-0.33	0.20-0.33
		aged	100				65-150	0.09-0.33	0.20-0.33
	Cast aluminium alloys	≤ 12% Si, non-aging	75	AP301U(N)			65-150	0.09-0.33	0.20-0.33
		≤ 12% Si, aged	90				65-150	0.09-0.33	0.20-0.33
		> 12% Si, non-aging	130				65-150	0.09-0.33	0.20-0.33
	Magnesium alloy		70						
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper	100	AP301U(N)			65-150	0.09-0.33	0.20-0.33
		Brass, bronze, red brass	90				65-150	0.09-0.33	0.20-0.33
Cu alloys, short-chip		110	65-150				0.09-0.33	0.20-0.33	
High tensile, Ampco alloy		300	65-150				0.09-0.33	0.20-0.33	
S	Heat-resistant alloys	Fe-based annealed	200	AP301U(N)			10-55	0.09-0.30	0.20-0.33
		Fe-based hardened	280				10-55	0.09-0.30	0.20-0.33
		Ni or Co-based annealed	250				10-55	0.09-0.30	0.20-0.33
		Ni or Co-based hardened	350				10-55	0.09-0.30	0.20-0.33
		Ni or Co-based cast	320				10-55	0.09-0.30	0.20-0.33
	Titanium alloys	Pure titanium	200	AP301U(N)			30-60	0.09-0.30	0.20-0.33
α alloys		375	30-60				0.09-0.30	0.20-0.33	
α and β alloys		375	30-60				0.09-0.30	0.20-0.33	
β alloys		410	30-60				0.09-0.30	0.20-0.33	
H	Hardened steel	Hardened and tempered	43-47 HRC						
	Hardened cast iron		47-60 HRC						

*) Insert position-P, I, C
P=peripheral insert, I=intermediate insert, C=center insert

Recommended Cutting Speed for Materials(Dia ≥63.50mm)

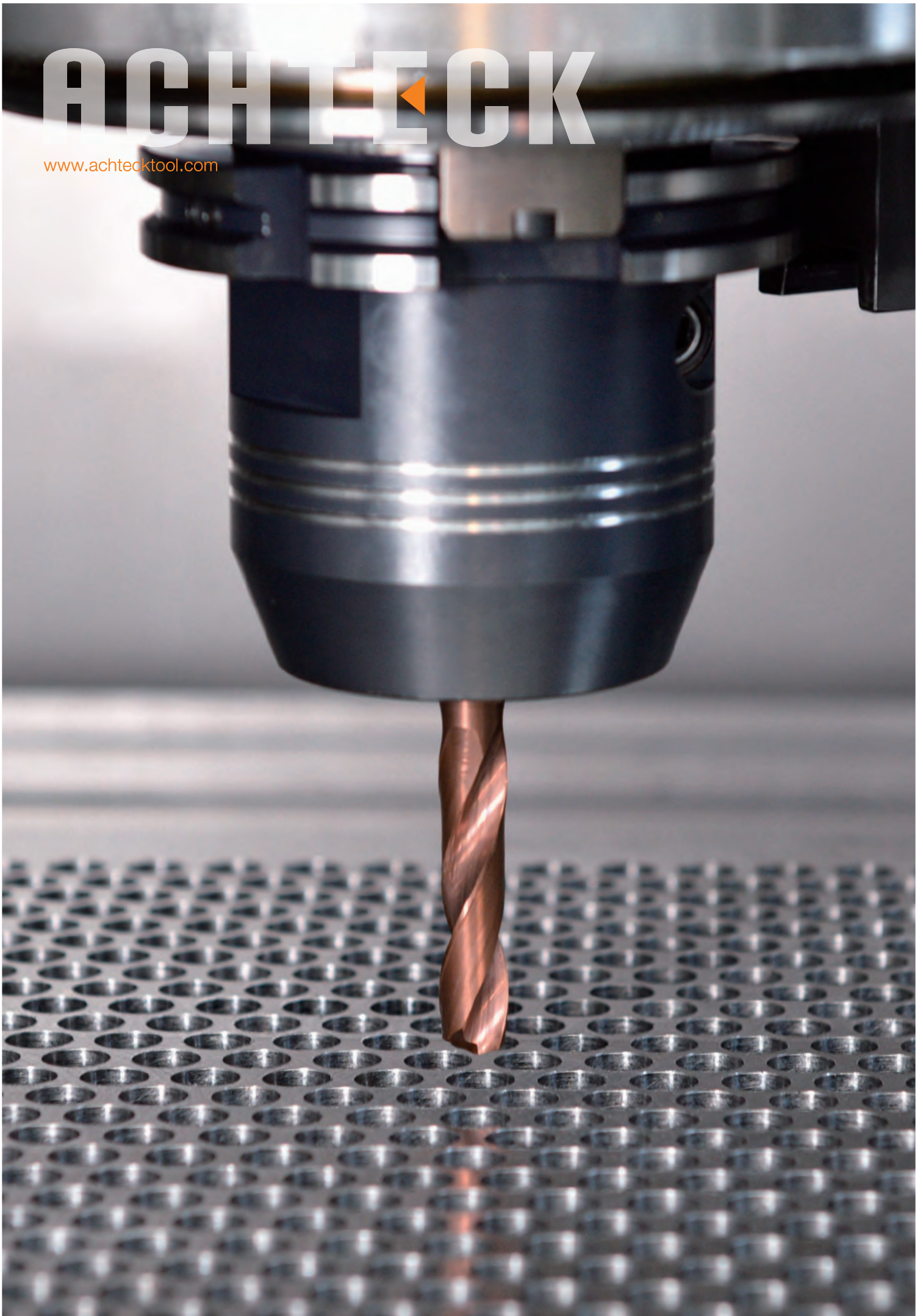
	Workpiece material		Brinell hardness (HB)	Grade			Cutting speed Vc m/min	Feed fn mm/r	
				Insert				Drilling dia mm	
				P	I	C		≥ 63.50	
P	Unalloyed steel	C=0.05-0.10%	125	AP301U(N)			80-100	0.18-0.35	
		C=0.10-0.25%	125				80-100	0.18-0.35	
		C=0.25-0.55%	150				80-100	0.18-0.35	
		C=0.55-0.80%	170				80-100	0.18-0.35	
	High carbon steel	Carbon tool steel	210	AP301U(N)			70-100	0.18-0.35	
	Low-alloyed steel	Non-Hardened		180	AP301U(N)			60-100	0.16-0.35
		Tempered		275				70-100	0.18-0.30
		Tempered		350				70-100	0.18-0.30
	High-alloyed steel	Annealed		200	AP301U(N)			60-100	0.16-0.30
		Hardened tool steel		325				60-100	0.16-0.30
Cast steel	Non-alloyed steel		180	AP301U(N)			50-100	0.15-0.30	
	Low-alloy (alloy<5%)		200				50-100	0.15-0.30	
M	Stainless steel	Non-Hardened/Ferritic/martensitic		200	AP301U(N)			50-90	0.16-0.35
		Austenitic		200				50-90	0.16-0.35
		Austenitic, precipitation hardened (PH)		300					
		Austenitic/ferritic, duplex		230					
K	Malleable cast iron	Ferritic		200	AP301U(N)				
		Pearlitic		260					
	Grey cast iron	Low tensile strength		180	AP301U(N)				
		High tensile strength		245					
	Nodular cast iron	Ferritic		160	AP301U(N)				
		Pearlitic		250					
		GGV (CGI)		230					
N	Wrought aluminium alloys	non-aging		30	AP301U(N)			65-130	0.10-0.30
		aged		100				65-130	0.10-0.30
	Cast aluminium alloys	≤ 12% Si, non-aging		75	AP301U(N)			65-130	0.10-0.30
		≤ 12% Si, aged		90				65-130	0.10-0.30
		> 12% Si, non-aging		130				65-130	0.10-0.30
	Magnesium alloy			70					
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	AP301U(N)			65-130	0.10-0.30
		Brass, bronze, red brass		90				65-130	0.10-0.30
Cu alloys, short-chip		110	65-130	0.10-0.30					
High tensile, Ampco alloy		300	65-130	0.10-0.30					
S	Heat-resistant alloys	Fe-based annealed		200	AP301U(N)			20-65	0.15-0.30
		Fe-based hardened		280				20-65	0.15-0.30
		Ni or Co-based annealed		250				20-65	0.15-0.30
		Ni or Co-based hardened		350				20-65	0.15-0.30
		Ni or Co-based cast		320					
	Titanium alloys	Pure titanium		200	AP301U(N)			30-100	0.15-0.30
α alloys		375	30-100	0.15-0.30					
α and β alloys		375	30-100	0.15-0.30					
β alloys		410	30-100	0.15-0.30					
H	Hardened steel	Hardened and tempered		43-47 HRC					
	Hardened cast iron			47-60 HRC					

*) Insert position-P, I, C
P=peripheral insert, I=intermediate insert, C=center insert

Drilling inserts

ACHTTECK

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CUTTING TOOL CATALOGUE

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Drilling tools denomination system	288
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Cutting data	305
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Drilling Tools Denomination System

D	1	06	-	03	-	03000	A	1	AP30P1	U
1	2	3	-	4	-	5	6	7	8	9

1-Tool group	
D	Drilling

2-Generation	
1	

3-Tool type	
06	Universal

4-Drilling depth	
03	~ 3 x Dc in accordance with DIN 6537K
05	~ 5 x Dc in accordance with DIN 6537L

5-Cutting diameter	
03000	3.0mm
12100	12.1mm

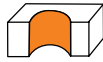
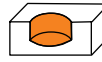


6-Shank type	
A	DIN 6535 HA cylindrical shank

7-Coolant	
0	External coolant
1	internal coolant

8-Grade	
AP30P1	

9-Application range	
U	Universal machining P.K.N

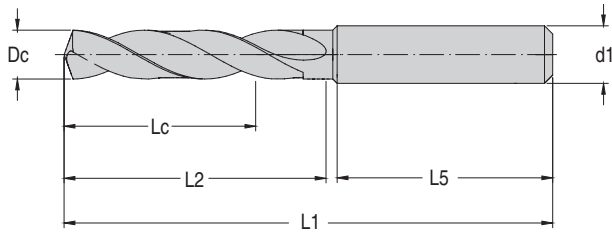
Product Overview

External coolant		
Machining application		
	① Through Hole	② Blind Hole
Drilling depth	3xDc	5xDc
Series	D106	D106
Standard	DIN 6537 K	DIN 6537 L
Dia. Range(mm)	3~16	3~16
Stock items	P289-P292	P293-P296
		

Internal coolant		
Machining application		
	① Through Hole	② Blind Hole
Drilling depth	3xDc	5xDc
Series	D106	D106
Standard	DIN 6537 K	DIN 6537 L
Dia. Range(mm)	3~16	3~16
Stock items	P297-P300	P301-P304
		

Solid Carbide Drill D106 with External Coolant - 3xDc

P	M	S	K	H	N	O
••			••		••	•



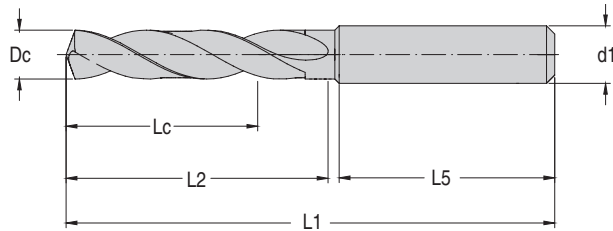
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-03000A0 AP30P1U	3		14	62	20	36	4	●
D106-03-03100A0 AP30P1U	3.1		14	62	20	36	4	●
D106-03-03175A0 AP30P1U	3.175	1/8"	14	62	20	36	4	○
D106-03-03200A0 AP30P1U	3.2		14	62	20	36	4	●
D106-03-03250A0 AP30P1U	3.25		14	62	20	36	4	○
D106-03-03300A0 AP30P1U	3.3		14	62	20	36	4	●
D106-03-03400A0 AP30P1U	3.4		14	62	20	36	4	○
D106-03-03500A0 AP30P1U	3.5		14	62	20	36	4	●
D106-03-03572A0 AP30P1U	3.572	9/64"	14	62	20	36	4	○
D106-03-03600A0 AP30P1U	3.6		14	62	20	36	4	●
D106-03-03650A0 AP30P1U	3.65		14	62	20	36	4	○
D106-03-03700A0 AP30P1U	3.7		14	62	20	36	4	●
D106-03-03800A0 AP30P1U	3.8		17	66	24	36	4	○
D106-03-03900A0 AP30P1U	3.9		17	66	24	36	4	●
D106-03-03969A0 AP30P1U	3.969	5/32"	17	66	24	36	4	○
D106-03-04000A0 AP30P1U	4		17	66	24	36	4	●
D106-03-04100A0 AP30P1U	4.1		17	66	24	36	6	○
D106-03-04200A0 AP30P1U	4.2		17	66	24	36	6	●
D106-03-04300A0 AP30P1U	4.3		17	66	24	36	6	○
D106-03-04366A0 AP30P1U	4.366	11/64"	17	66	24	36	6	○
D106-03-04400A0 AP30P1U	4.4		17	66	24	36	6	○
D106-03-04500A0 AP30P1U	4.5		17	66	24	36	6	●
D106-03-04600A0 AP30P1U	4.6		17	66	24	36	6	○
D106-03-04650A0 AP30P1U	4.65		17	66	24	36	6	○
D106-03-04700A0 AP30P1U	4.7		17	66	24	36	6	○
D106-03-04763A0 AP30P1U	4.763	3/16"	20	66	28	36	6	○
D106-03-04800A0 AP30P1U	4.8		20	66	28	36	6	●
D106-03-04900A0 AP30P1U	4.9		20	66	28	36	6	●
D106-03-05000A0 AP30P1U	5		20	66	28	36	6	●
D106-03-05100A0 AP30P1U	5.1		20	66	28	36	6	●
D106-03-05159A0 AP30P1U	5.159	13/64"	20	66	28	36	6	○
D106-03-05200A0 AP30P1U	5.2		20	66	28	36	6	●
D106-03-05300A0 AP30P1U	5.3		20	66	28	36	6	○
D106-03-05400A0 AP30P1U	5.4		20	66	28	36	6	○
D106-03-05500A0 AP30P1U	5.5		20	66	28	36	6	●
D106-03-05550A0 AP30P1U	5.55		20	66	28	36	6	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with External Coolant - 3xDc

P	M	S	K	H	N	O
••			••		••	•

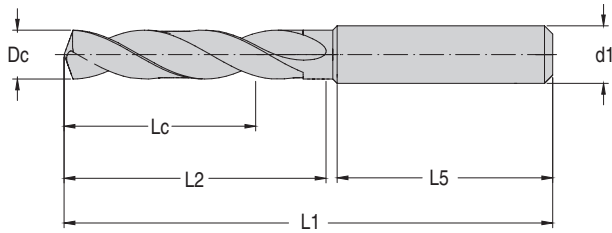


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-05556A0 AP30P1U	5.556	7/32"	20	66	28	36	6	○
D106-03-05600A0 AP30P1U	5.6		20	66	28	36	6	○
D106-03-05700A0 AP30P1U	5.7		20	66	28	36	6	○
D106-03-05800A0 AP30P1U	5.8		20	66	28	36	6	●
D106-03-05900A0 AP30P1U	5.9		20	66	28	36	6	●
D106-03-05953A0 AP30P1U	5.953	15/64"	20	66	28	36	6	○
D106-03-06000A0 AP30P1U	6		20	66	28	36	6	●
D106-03-06100A0 AP30P1U	6.1		24	79	41	36	8	○
D106-03-06200A0 AP30P1U	6.2		24	79	41	36	8	○
D106-03-06300A0 AP30P1U	6.3		24	79	41	36	8	○
D106-03-06350A0 AP30P1U	6.35	1/4"	24	79	41	36	8	○
D106-03-06400A0 AP30P1U	6.4		24	79	41	36	8	○
D106-03-06500A0 AP30P1U	6.5		24	79	41	36	8	●
D106-03-06600A0 AP30P1U	6.6		24	79	41	36	8	○
D106-03-06700A0 AP30P1U	6.7		24	79	41	36	8	○
D106-03-06747A0 AP30P1U	6.747	17/64"	24	79	41	36	8	○
D106-03-06800A0 AP30P1U	6.8		24	79	41	36	8	●
D106-03-06900A0 AP30P1U	6.9		24	79	41	36	8	●
D106-03-07000A0 AP30P1U	7		24	79	41	36	8	●
D106-03-07100A0 AP30P1U	7.1		29	79	41	36	8	○
D106-03-07144A0 AP30P1U	7.144	9/32"	29	79	41	36	8	○
D106-03-07200A0 AP30P1U	7.2		29	79	41	36	8	○
D106-03-07300A0 AP30P1U	7.3		29	79	41	36	8	○
D106-03-07400A0 AP30P1U	7.4		29	79	41	36	8	●
D106-03-07500A0 AP30P1U	7.5		29	79	41	36	8	●
D106-03-07541A0 AP30P1U	7.541	19/64"	29	79	41	36	8	○
D106-03-07550A0 AP30P1U	7.55		29	79	41	36	8	○
D106-03-07600A0 AP30P1U	7.6		29	79	41	36	8	○
D106-03-07700A0 AP30P1U	7.7		29	79	41	36	8	○
D106-03-07800A0 AP30P1U	7.8		29	79	41	36	8	●
D106-03-07900A0 AP30P1U	7.9		29	79	41	36	8	●
D106-03-07938A0 AP30P1U	7.938	5/16"	29	79	41	36	8	○
D106-03-08000A0 AP30P1U	8		29	79	41	36	8	●
D106-03-08100A0 AP30P1U	8.1		35	89	47	40	10	○
D106-03-08200A0 AP30P1U	8.2		35	89	47	40	10	○
D106-03-08300A0 AP30P1U	8.3		35	89	47	40	10	○
D106-03-08334A0 AP30P1U	8.334	21/64"	35	89	47	40	10	○
D106-03-08400A0 AP30P1U	8.4		35	89	47	40	10	○
D106-03-08500A0 AP30P1U	8.5		35	89	47	40	10	●
D106-03-08600A0 AP30P1U	8.6		35	89	47	40	10	●
D106-03-08700A0 AP30P1U	8.7		35	89	47	40	10	○
D106-03-08731A0 AP30P1U	8.731	11/32"	35	89	47	40	10	○
D106-03-08800A0 AP30P1U	8.8		35	89	47	40	10	●
D106-03-08900A0 AP30P1U	8.9		35	89	47	40	10	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with External Coolant - 3xDc

P	M	S	K	H	N	O
••			••		••	•



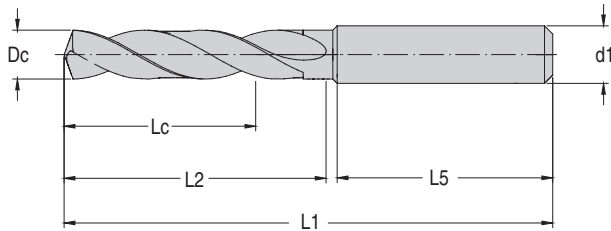
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-09000A0 AP30P1U	9		35	89	47	40	10	●
D106-03-09100A0 AP30P1U	9.1		35	89	47	40	10	○
D106-03-09128A0 AP30P1U	9.128	23/64"	35	89	47	40	10	○
D106-03-09200A0 AP30P1U	9.2		35	89	47	40	10	○
D106-03-09300A0 AP30P1U	9.3		35	89	47	40	10	●
D106-03-09400A0 AP30P1U	9.4		35	89	47	40	10	○
D106-03-09500A0 AP30P1U	9.5		35	89	47	40	10	○
D106-03-09525A0 AP30P1U	9.525	3/8"	35	89	47	40	10	○
D106-03-09550A0 AP30P1U	9.55		35	89	47	40	10	○
D106-03-09600A0 AP30P1U	9.6		35	89	47	40	10	○
D106-03-09700A0 AP30P1U	9.7		35	89	47	40	10	○
D106-03-09800A0 AP30P1U	9.8		35	89	47	40	10	●
D106-03-09900A0 AP30P1U	9.9		35	89	47	40	10	●
D106-03-09922A0 AP30P1U	9.922	25/64"	35	89	47	40	10	○
D106-03-10000A0 AP30P1U	10		35	89	47	40	10	●
D106-03-10100A0 AP30P1U	10.1		40	102	55	45	12	●
D106-03-10200A0 AP30P1U	10.2		40	102	55	45	12	●
D106-03-10300A0 AP30P1U	10.3		40	102	55	45	12	●
D106-03-10319A0 AP30P1U	10.319	13/32"	40	102	55	45	12	○
D106-03-10400A0 AP30P1U	10.4		40	102	55	45	12	○
D106-03-10500A0 AP30P1U	10.5		40	102	55	45	12	●
D106-03-10600A0 AP30P1U	10.6		40	102	55	45	12	●
D106-03-10700A0 AP30P1U	10.7		40	102	55	45	12	○
D106-03-10716A0 AP30P1U	10.716	27/64"	40	102	55	45	12	○
D106-03-10800A0 AP30P1U	10.8		40	102	55	45	12	●
D106-03-10900A0 AP30P1U	10.9		40	102	55	45	12	○
D106-03-11000A0 AP30P1U	11		40	102	55	45	12	●
D106-03-11100A0 AP30P1U	11.1		40	102	55	45	12	○
D106-03-11113A0 AP30P1U	11.113	7/16"	40	102	55	45	12	○
D106-03-11200A0 AP30P1U	11.2		40	102	55	45	12	○
D106-03-11300A0 AP30P1U	11.3		40	102	55	45	12	○
D106-03-11400A0 AP30P1U	11.4		40	102	55	45	12	○
D106-03-11500A0 AP30P1U	11.5		40	102	55	45	12	○
D106-03-11509A0 AP30P1U	11.509	29/64"	40	102	55	45	12	○
D106-03-11550A0 AP30P1U	11.55		40	102	55	45	12	○
D106-03-11600A0 AP30P1U	11.6		40	102	55	45	12	○
D106-03-11700A0 AP30P1U	11.7		40	102	55	45	12	○
D106-03-11800A0 AP30P1U	11.8		40	102	55	45	12	●
D106-03-11900A0 AP30P1U	11.9		40	102	55	45	12	○
D106-03-11906A0 AP30P1U	11.906	15/32"	40	102	55	45	12	○
D106-03-12000A0 AP30P1U	12		40	102	55	45	12	●
D106-03-12100A0 AP30P1U	12.1		43	107	60	45	14	○
D106-03-12200A0 AP30P1U	12.2		43	107	60	45	14	○
D106-03-12250A0 AP30P1U	12.25		43	107	60	45	14	○

Solid Carbide Drill

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with External Coolant - 3xDc

P	M	S	K	H	N	O
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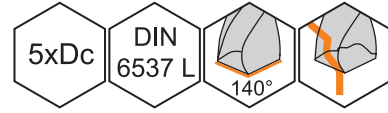
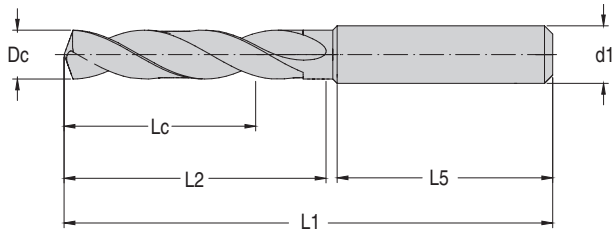


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-12300A0 AP30P1U	12.3		43	107	60	45	14	○
D106-03-12303A0 AP30P1U	12.303	31/64"	43	107	60	45	14	○
D106-03-12400A0 AP30P1U	12.4		43	107	60	45	14	○
D106-03-12500A0 AP30P1U	12.5		43	107	60	45	14	●
D106-03-12600A0 AP30P1U	12.6		43	107	60	45	14	○
D106-03-12700A0 AP30P1U	12.7	1/2"	43	107	60	45	14	○
D106-03-12750A0 AP30P1U	12.75		43	107	60	45	14	○
D106-03-12800A0 AP30P1U	12.8		43	107	60	45	14	○
D106-03-12900A0 AP30P1U	12.9		43	107	60	45	14	○
D106-03-13000A0 AP30P1U	13		43	107	60	45	14	●
D106-03-13100A0 AP30P1U	13.1		43	107	60	45	14	○
D106-03-13200A0 AP30P1U	13.2		43	107	60	45	14	●
D106-03-13300A0 AP30P1U	13.3		43	107	60	45	14	○
D106-03-13400A0 AP30P1U	13.4		43	107	60	45	14	○
D106-03-13494A0 AP30P1U	13.494	17/32"	43	107	60	45	14	○
D106-03-13500A0 AP30P1U	13.5		43	107	60	45	14	○
D106-03-13600A0 AP30P1U	13.6		43	107	60	45	14	○
D106-03-13700A0 AP30P1U	13.7		43	107	60	45	14	○
D106-03-13800A0 AP30P1U	13.8		43	107	60	45	14	○
D106-03-13900A0 AP30P1U	13.9		43	107	60	45	14	○
D106-03-14000A0 AP30P1U	14		43	107	60	45	14	●
D106-03-14100A0 AP30P1U	14.1		45	115	65	48	16	●
D106-03-14200A0 AP30P1U	14.2		45	115	65	48	16	●
D106-03-14288A0 AP30P1U	14.288	9/16"	45	115	65	48	16	○
D106-03-14300A0 AP30P1U	14.3		45	115	65	48	16	○
D106-03-14400A0 AP30P1U	14.4		45	115	65	48	16	○
D106-03-14500A0 AP30P1U	14.5		45	115	65	48	16	●
D106-03-14600A0 AP30P1U	14.6		45	115	65	48	16	●
D106-03-14700A0 AP30P1U	14.7		45	115	65	48	16	●
D106-03-14750A0 AP30P1U	14.75		45	115	65	48	16	○
D106-03-14800A0 AP30P1U	14.8		45	115	65	48	16	○
D106-03-15000A0 AP30P1U	15		45	115	65	48	16	●
D106-03-15100A0 AP30P1U	15.1		45	115	65	48	16	○
D106-03-15200A0 AP30P1U	15.2		45	115	65	48	16	○
D106-03-15300A0 AP30P1U	15.3		45	115	65	48	16	○
D106-03-15500A0 AP30P1U	15.5		45	115	65	48	16	●
D106-03-15600A0 AP30P1U	15.6		45	115	65	48	16	○
D106-03-15700A0 AP30P1U	15.7		45	115	65	48	16	●
D106-03-15800A0 AP30P1U	15.8		45	115	65	48	16	●
D106-03-15875A0 AP30P1U	15.875	5/8"	45	115	65	48	16	○
D106-03-15900A0 AP30P1U	15.9		45	115	65	48	16	○
D106-03-16000A0 AP30P1U	16		45	115	65	48	16	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with External Coolant - 5xDc

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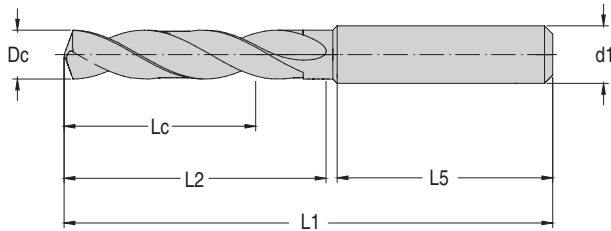
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-03000A0 AP30P1U	3		23	66	28	36	4	●
D106-05-03100A0 AP30P1U	3.1		23	66	28	36	4	●
D106-05-03175A0 AP30P1U	3.175	1/8"	23	66	28	36	4	○
D106-05-03200A0 AP30P1U	3.2		23	66	28	36	4	●
D106-05-03250A0 AP30P1U	3.25		23	66	28	36	4	○
D106-05-03300A0 AP30P1U	3.3		23	66	28	36	4	●
D106-05-03400A0 AP30P1U	3.4		23	66	28	36	4	○
D106-05-03500A0 AP30P1U	3.5		23	66	28	36	4	●
D106-05-03572A0 AP30P1U	3.572	9/64"	23	66	28	36	4	○
D106-05-03600A0 AP30P1U	3.6		23	66	28	36	4	●
D106-05-03650A0 AP30P1U	3.65		23	66	28	36	4	○
D106-05-03700A0 AP30P1U	3.7		23	66	28	36	4	●
D106-05-03800A0 AP30P1U	3.8		29	74	36	36	4	○
D106-05-03900A0 AP30P1U	3.9		29	74	36	36	4	●
D106-05-03969A0 AP30P1U	3.969	5/32"	29	74	36	36	4	○
D106-05-04000A0 AP30P1U	4		29	74	36	36	4	●
D106-05-04100A0 AP30P1U	4.1		29	74	36	36	6	○
D106-05-04200A0 AP30P1U	4.2		29	74	36	36	6	●
D106-05-04300A0 AP30P1U	4.3		29	74	36	36	6	○
D106-05-04366A0 AP30P1U	4.366	11/64"	29	74	36	36	6	○
D106-05-04400A0 AP30P1U	4.4		29	74	36	36	6	○
D106-05-04500A0 AP30P1U	4.5		29	74	36	36	6	●
D106-05-04600A0 AP30P1U	4.6		29	74	36	36	6	○
D106-05-04650A0 AP30P1U	4.65		29	74	36	36	6	○
D106-05-04700A0 AP30P1U	4.7		29	74	36	36	6	○
D106-05-04763A0 AP30P1U	4.763	3/16"	35	82	44	36	6	○
D106-05-04800A0 AP30P1U	4.8		35	82	44	36	6	●
D106-05-04900A0 AP30P1U	4.9		35	82	44	36	6	●
D106-05-05000A0 AP30P1U	5		35	82	44	36	6	●
D106-05-05100A0 AP30P1U	5.1		35	82	44	36	6	●
D106-05-05159A0 AP30P1U	5.159	13/64"	35	82	44	36	6	○
D106-05-05200A0 AP30P1U	5.2		35	82	44	36	6	●
D106-05-05300A0 AP30P1U	5.3		35	82	44	36	6	○
D106-05-05400A0 AP30P1U	5.4		35	82	44	36	6	○
D106-05-05500A0 AP30P1U	5.5		35	82	44	36	6	●
D106-05-05550A0 AP30P1U	5.55		35	82	44	36	6	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with External Coolant - 5xDc

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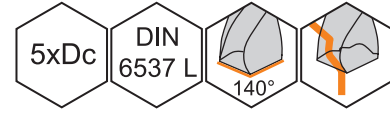
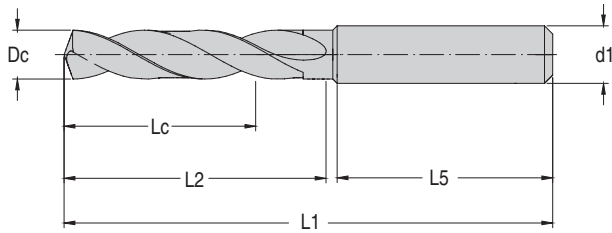


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-05556A0 AP30P1U	5.556	7/32"	35	82	44	36	6	○
D106-05-05600A0 AP30P1U	5.6		35	82	44	36	6	○
D106-05-05700A0 AP30P1U	5.7		35	82	44	36	6	○
D106-05-05800A0 AP30P1U	5.8		35	82	44	36	6	●
D106-05-05900A0 AP30P1U	5.9		35	82	44	36	6	●
D106-05-05953A0 AP30P1U	5.953	15/64"	35	82	44	36	6	○
D106-05-06000A0 AP30P1U	6		35	82	44	36	6	●
D106-05-06100A0 AP30P1U	6.1		43	91	53	36	8	○
D106-05-06200A0 AP30P1U	6.2		43	91	53	36	8	○
D106-05-06300A0 AP30P1U	6.3		43	91	53	36	8	○
D106-05-06350A0 AP30P1U	6.35	1/4"	43	91	53	36	8	○
D106-05-06400A0 AP30P1U	6.4		43	91	53	36	8	○
D106-05-06500A0 AP30P1U	6.5		43	91	53	36	8	●
D106-05-06600A0 AP30P1U	6.6		43	91	53	36	8	○
D106-05-06700A0 AP30P1U	6.7		43	91	53	36	8	○
D106-05-06747A0 AP30P1U	6.747	17/64"	43	91	53	36	8	○
D106-05-06800A0 AP30P1U	6.8		43	91	53	36	8	●
D106-05-06900A0 AP30P1U	6.9		43	91	53	36	8	●
D106-05-07000A0 AP30P1U	7		43	91	53	36	8	●
D106-05-07100A0 AP30P1U	7.1		43	91	53	36	8	○
D106-05-07144A0 AP30P1U	7.144	9/32"	43	91	53	36	8	○
D106-05-07200A0 AP30P1U	7.2		43	91	53	36	8	○
D106-05-07300A0 AP30P1U	7.3		43	91	53	36	8	○
D106-05-07400A0 AP30P1U	7.4		43	91	53	36	8	●
D106-05-07500A0 AP30P1U	7.5		43	91	53	36	8	●
D106-05-07541A0 AP30P1U	7.541	19/64"	43	91	53	36	8	○
D106-05-07550A0 AP30P1U	7.55		43	91	53	36	8	○
D106-05-07600A0 AP30P1U	7.6		43	91	53	36	8	○
D106-05-07700A0 AP30P1U	7.7		43	91	53	36	8	○
D106-05-07800A0 AP30P1U	7.8		43	91	53	36	8	●
D106-05-07900A0 AP30P1U	7.9		43	91	53	36	8	●
D106-05-07938A0 AP30P1U	7.938	5/16"	43	91	53	36	8	○
D106-05-08000A0 AP30P1U	8		43	91	53	36	8	●
D106-05-08100A0 AP30P1U	8.1		49	103	61	40	10	○
D106-05-08200A0 AP30P1U	8.2		49	103	61	40	10	○
D106-05-08300A0 AP30P1U	8.3		49	103	61	40	10	○
D106-05-08334A0 AP30P1U	8.334	21/64"	49	103	61	40	10	○
D106-05-08400A0 AP30P1U	8.4		49	103	61	40	10	○
D106-05-08500A0 AP30P1U	8.5		49	103	61	40	10	●
D106-05-08600A0 AP30P1U	8.6		49	103	61	40	10	●
D106-05-08700A0 AP30P1U	8.7		49	103	61	40	10	○
D106-05-08731A0 AP30P1U	8.731	11/32"	49	103	61	40	10	○
D106-05-08800A0 AP30P1U	8.8		49	103	61	40	10	●
D106-05-08900A0 AP30P1U	8.9		49	103	61	40	10	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with External Coolant - 5xDc

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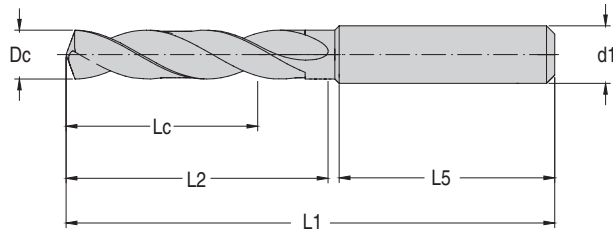
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-09000A0 AP30P1U	9		49	103	61	40	10	●
D106-05-09100A0 AP30P1U	9.1		49	103	61	40	10	○
D106-05-09128A0 AP30P1U	9.128	23/64"	49	103	61	40	10	○
D106-05-09200A0 AP30P1U	9.2		49	103	61	40	10	○
D106-05-09300A0 AP30P1U	9.3		49	103	61	40	10	●
D106-05-09400A0 AP30P1U	9.4		49	103	61	40	10	○
D106-05-09500A0 AP30P1U	9.5		49	103	61	40	10	○
D106-05-09525A0 AP30P1U	9.525	3/8"	49	103	61	40	10	○
D106-05-09550A0 AP30P1U	9.55		49	103	61	40	10	○
D106-05-09600A0 AP30P1U	9.6		49	103	61	40	10	○
D106-05-09700A0 AP30P1U	9.7		49	103	61	40	10	○
D106-05-09800A0 AP30P1U	9.8		49	103	61	40	10	●
D106-05-09900A0 AP30P1U	9.9		49	103	61	40	10	●
D106-05-09922A0 AP30P1U	9.922	25/64"	49	103	61	40	10	○
D106-05-10000A0 AP30P1U	10		49	103	61	40	10	●
D106-05-10100A0 AP30P1U	10.1		56	118	71	45	12	●
D106-05-10200A0 AP30P1U	10.2		56	118	71	45	12	●
D106-05-10300A0 AP30P1U	10.3		56	118	71	45	12	●
D106-05-10319A0 AP30P1U	10.319	13/32"	56	118	71	45	12	○
D106-05-10400A0 AP30P1U	10.4		56	118	71	45	12	○
D106-05-10500A0 AP30P1U	10.5		56	118	71	45	12	●
D106-05-10600A0 AP30P1U	10.6		56	118	71	45	12	●
D106-05-10700A0 AP30P1U	10.7		56	118	71	45	12	○
D106-05-10716A0 AP30P1U	10.716	27/64"	56	118	71	45	12	○
D106-05-10800A0 AP30P1U	10.8		56	118	71	45	12	●
D106-05-10900A0 AP30P1U	10.9		56	118	71	45	12	○
D106-05-11000A0 AP30P1U	11		56	118	71	45	12	●
D106-05-11100A0 AP30P1U	11.1		56	118	71	45	12	○
D106-05-11113A0 AP30P1U	11.113	7/16"	56	118	71	45	12	○
D106-05-11200A0 AP30P1U	11.2		56	118	71	45	12	○
D106-05-11300A0 AP30P1U	11.3		56	118	71	45	12	○
D106-05-11400A0 AP30P1U	11.4		56	118	71	45	12	○
D106-05-11500A0 AP30P1U	11.5		56	118	71	45	12	○
D106-05-11509A0 AP30P1U	11.509	29/64"	56	118	71	45	12	○
D106-05-11550A0 AP30P1U	11.55		56	118	71	45	12	○
D106-05-11600A0 AP30P1U	11.6		56	118	71	45	12	○
D106-05-11700A0 AP30P1U	11.7		56	118	71	45	12	○
D106-05-11800A0 AP30P1U	11.8		56	118	71	45	12	●
D106-05-11900A0 AP30P1U	11.9		56	118	71	45	12	○
D106-05-11906A0 AP30P1U	11.906	15/32"	56	118	71	45	12	○
D106-05-12000A0 AP30P1U	12		56	118	71	45	12	●
D106-05-12100A0 AP30P1U	12.1		60	124	77	45	14	○
D106-05-12200A0 AP30P1U	12.2		60	124	77	45	14	○
D106-05-12250A0 AP30P1U	12.25		60	124	77	45	14	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with External Coolant - 5xDc

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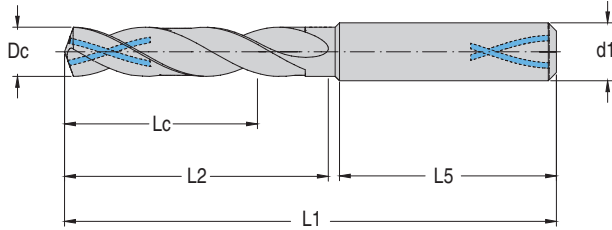


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-12300A0 AP30P1U	12.3		60	124	77	45	14	○
D106-05-12303A0 AP30P1U	12.303	31/64"	60	124	77	45	14	○
D106-05-12400A0 AP30P1U	12.4		60	124	77	45	14	○
D106-05-12500A0 AP30P1U	12.5		60	124	77	45	14	●
D106-05-12600A0 AP30P1U	12.6		60	124	77	45	14	○
D106-05-12700A0 AP30P1U	12.7	1/2"	60	124	77	45	14	○
D106-05-12750A0 AP30P1U	12.75		60	124	77	45	14	○
D106-05-12800A0 AP30P1U	12.8		60	124	77	45	14	○
D106-05-12900A0 AP30P1U	12.9		60	124	77	45	14	○
D106-05-13000A0 AP30P1U	13		60	124	77	45	14	●
D106-05-13100A0 AP30P1U	13.1		60	124	77	45	14	○
D106-05-13200A0 AP30P1U	13.2		60	124	77	45	14	●
D106-05-13300A0 AP30P1U	13.3		60	124	77	45	14	○
D106-05-13400A0 AP30P1U	13.4		60	124	77	45	14	○
D106-05-13494A0 AP30P1U	13.494	17/32"	60	124	77	45	14	○
D106-05-13500A0 AP30P1U	13.5		60	124	77	45	14	○
D106-05-13600A0 AP30P1U	13.6		60	124	77	45	14	○
D106-05-13700A0 AP30P1U	13.7		60	124	77	45	14	●
D106-05-13800A0 AP30P1U	13.8		60	124	77	45	14	○
D106-05-13900A0 AP30P1U	13.9		60	124	77	45	14	○
D106-05-14000A0 AP30P1U	14		60	124	77	45	14	●
D106-05-14100A0 AP30P1U	14.1		63	133	83	48	16	●
D106-05-14200A0 AP30P1U	14.2		63	133	83	48	16	●
D106-05-14288A0 AP30P1U	14.288	9/16"	63	133	83	48	16	○
D106-05-14300A0 AP30P1U	14.3		63	133	83	48	16	○
D106-05-14400A0 AP30P1U	14.4		63	133	83	48	16	○
D106-05-14500A0 AP30P1U	14.5		63	133	83	48	16	●
D106-05-14600A0 AP30P1U	14.6		63	133	83	48	16	●
D106-05-14700A0 AP30P1U	14.7		63	133	83	48	16	●
D106-05-14750A0 AP30P1U	14.75		63	133	83	48	16	○
D106-05-14800A0 AP30P1U	14.8		63	133	83	48	16	○
D106-05-15000A0 AP30P1U	15		63	133	83	48	16	●
D106-05-15100A0 AP30P1U	15.1		63	133	83	48	16	○
D106-05-15200A0 AP30P1U	15.2		63	133	83	48	16	○
D106-05-15300A0 AP30P1U	15.3		63	133	83	48	16	○
D106-05-15500A0 AP30P1U	15.5		63	133	83	48	16	●
D106-05-15600A0 AP30P1U	15.6		63	133	83	48	16	○
D106-05-15700A0 AP30P1U	15.7		63	133	83	48	16	●
D106-05-15800A0 AP30P1U	15.8		63	133	83	48	16	●
D106-05-15875A0 AP30P1U	15.875	5/8"	63	133	83	48	16	○
D106-05-15900A0 AP30P1U	15.9		63	133	83	48	16	○
D106-05-16000A0 AP30P1U	16		63	133	83	48	16	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with Internal Coolant - 3xDc

P	M	S	K	H	N	O
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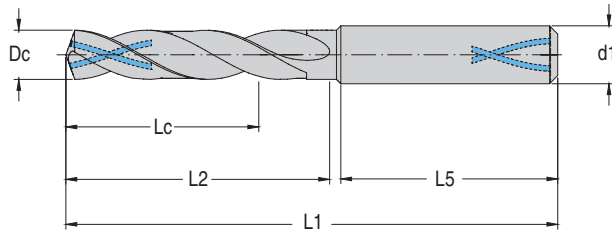
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-03000A1 AP30P1U	3		14	62	20	36	4	●
D106-03-03100A1 AP30P1U	3.1		14	62	20	36	4	●
D106-03-03175A1 AP30P1U	3.175	1/8"	14	62	20	36	4	○
D106-03-03200A1 AP30P1U	3.2		14	62	20	36	4	●
D106-03-03250A1 AP30P1U	3.25		14	62	20	36	4	○
D106-03-03300A1 AP30P1U	3.3		14	62	20	36	4	●
D106-03-03400A1 AP30P1U	3.4		14	62	20	36	4	○
D106-03-03500A1 AP30P1U	3.5		14	62	20	36	4	●
D106-03-03572A1 AP30P1U	3.572	9/64"	14	62	20	36	4	○
D106-03-03600A1 AP30P1U	3.6		14	62	20	36	4	●
D106-03-03650A1 AP30P1U	3.65		14	62	20	36	4	○
D106-03-03700A1 AP30P1U	3.7		14	62	20	36	4	●
D106-03-03800A1 AP30P1U	3.8		17	66	24	36	4	○
D106-03-03900A1 AP30P1U	3.9		17	66	24	36	4	●
D106-03-03969A1 AP30P1U	3.969	5/32"	17	66	24	36	4	○
D106-03-04000A1 AP30P1U	4		17	66	24	36	4	●
D106-03-04100A1 AP30P1U	4.1		17	66	24	36	6	○
D106-03-04200A1 AP30P1U	4.2		17	66	24	36	6	●
D106-03-04300A1 AP30P1U	4.3		17	66	24	36	6	○
D106-03-04366A1 AP30P1U	4.366	11/64"	17	66	24	36	6	○
D106-03-04400A1 AP30P1U	4.4		17	66	24	36	6	○
D106-03-04500A1 AP30P1U	4.5		17	66	24	36	6	●
D106-03-04600A1 AP30P1U	4.6		17	66	24	36	6	○
D106-03-04650A1 AP30P1U	4.65		17	66	24	36	6	○
D106-03-04700A1 AP30P1U	4.7		17	66	24	36	6	○
D106-03-04763A1 AP30P1U	4.763	3/16"	20	66	28	36	6	○
D106-03-04800A1 AP30P1U	4.8		20	66	28	36	6	●
D106-03-04900A1 AP30P1U	4.9		20	66	28	36	6	●
D106-03-05000A1 AP30P1U	5		20	66	28	36	6	●
D106-03-05100A1 AP30P1U	5.1		20	66	28	36	6	●
D106-03-05159A1 AP30P1U	5.159	13/64"	20	66	28	36	6	○
D106-03-05200A1 AP30P1U	5.2		20	66	28	36	6	●
D106-03-05300A1 AP30P1U	5.3		20	66	28	36	6	○
D106-03-05400A1 AP30P1U	5.4		20	66	28	36	6	○
D106-03-05500A1 AP30P1U	5.5		20	66	28	36	6	●
D106-03-05550A1 AP30P1U	5.55		20	66	28	36	6	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with Internal Coolant - 3xDc

P	M	S	K	H	N	O
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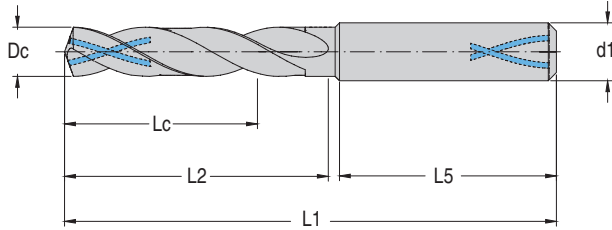


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-05556A1 AP30P1U	5.556	7/32"	20	66	28	36	6	○
D106-03-05600A1 AP30P1U	5.6		20	66	28	36	6	○
D106-03-05700A1 AP30P1U	5.7		20	66	28	36	6	○
D106-03-05800A1 AP30P1U	5.8		20	66	28	36	6	●
D106-03-05900A1 AP30P1U	5.9		20	66	28	36	6	●
D106-03-05953A1 AP30P1U	5.953	15/64"	20	66	28	36	6	○
D106-03-06000A1 AP30P1U	6		20	66	28	36	6	●
D106-03-06100A1 AP30P1U	6.1		24	79	41	36	8	○
D106-03-06200A1 AP30P1U	6.2		24	79	41	36	8	○
D106-03-06300A1 AP30P1U	6.3		24	79	41	36	8	○
D106-03-06350A1 AP30P1U	6.35	1/4"	24	79	41	36	8	○
D106-03-06400A1 AP30P1U	6.4		24	79	41	36	8	○
D106-03-06500A1 AP30P1U	6.5		24	79	41	36	8	●
D106-03-06600A1 AP30P1U	6.6		24	79	41	36	8	○
D106-03-06700A1 AP30P1U	6.7		24	79	41	36	8	○
D106-03-06747A1 AP30P1U	6.747	17/64"	24	79	41	36	8	○
D106-03-06800A1 AP30P1U	6.8		24	79	41	36	8	●
D106-03-06900A1 AP30P1U	6.9		24	79	41	36	8	●
D106-03-07000A1 AP30P1U	7		24	79	41	36	8	●
D106-03-07100A1 AP30P1U	7.1		29	79	41	36	8	○
D106-03-07144A1 AP30P1U	7.144	9/32"	29	79	41	36	8	○
D106-03-07200A1 AP30P1U	7.2		29	79	41	36	8	○
D106-03-07300A1 AP30P1U	7.3		29	79	41	36	8	○
D106-03-07400A1 AP30P1U	7.4		29	79	41	36	8	●
D106-03-07500A1 AP30P1U	7.5		29	79	41	36	8	●
D106-03-07541A1 AP30P1U	7.541	19/64"	29	79	41	36	8	○
D106-03-07550A1 AP30P1U	7.55		29	79	41	36	8	○
D106-03-07600A1 AP30P1U	7.6		29	79	41	36	8	○
D106-03-07700A1 AP30P1U	7.7		29	79	41	36	8	○
D106-03-07800A1 AP30P1U	7.8		29	79	41	36	8	●
D106-03-07900A1 AP30P1U	7.9		29	79	41	36	8	●
D106-03-07938A1 AP30P1U	7.938	5/16"	29	79	41	36	8	○
D106-03-08000A1 AP30P1U	8		29	79	41	36	8	●
D106-03-08100A1 AP30P1U	8.1		35	89	47	40	10	○
D106-03-08200A1 AP30P1U	8.2		35	89	47	40	10	○
D106-03-08300A1 AP30P1U	8.3		35	89	47	40	10	○
D106-03-08334A1 AP30P1U	8.334	21/64"	35	89	47	40	10	○
D106-03-08400A1 AP30P1U	8.4		35	89	47	40	10	○
D106-03-08500A1 AP30P1U	8.5		35	89	47	40	10	●
D106-03-08600A1 AP30P1U	8.6		35	89	47	40	10	●
D106-03-08700A1 AP30P1U	8.7		35	89	47	40	10	○
D106-03-08731A1 AP30P1U	8.731	11/32"	35	89	47	40	10	○
D106-03-08800A1 AP30P1U	8.8		35	89	47	40	10	●
D106-03-08900A1 AP30P1U	8.9		35	89	47	40	10	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with Internal Coolant - 3xDc

P	M	S	K	H	N	O
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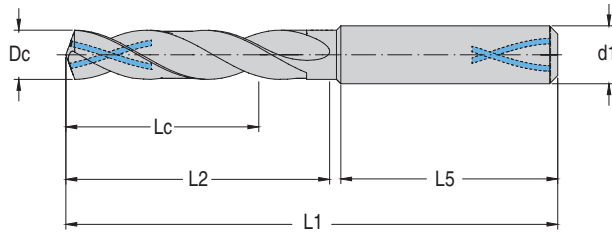
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-09000A1 AP30P1U	9		35	89	47	40	10	●
D106-03-09100A1 AP30P1U	9.1		35	89	47	40	10	○
D106-03-09128A1 AP30P1U	9.128	23/64"	35	89	47	40	10	○
D106-03-09200A1 AP30P1U	9.2		35	89	47	40	10	○
D106-03-09300A1 AP30P1U	9.3		35	89	47	40	10	●
D106-03-09400A1 AP30P1U	9.4		35	89	47	40	10	○
D106-03-09500A1 AP30P1U	9.5		35	89	47	40	10	○
D106-03-09525A1 AP30P1U	9.525	3/8"	35	89	47	40	10	○
D106-03-09550A1 AP30P1U	9.55		35	89	47	40	10	○
D106-03-09600A1 AP30P1U	9.6		35	89	47	40	10	○
D106-03-09700A1 AP30P1U	9.7		35	89	47	40	10	○
D106-03-09800A1 AP30P1U	9.8		35	89	47	40	10	●
D106-03-09900A1 AP30P1U	9.9		35	89	47	40	10	●
D106-03-09922A1 AP30P1U	9.922	25/64"	35	89	47	40	10	○
D106-03-10000A1 AP30P1U	10		35	89	47	40	10	●
D106-03-10100A1 AP30P1U	10.1		40	102	55	45	12	●
D106-03-10200A1 AP30P1U	10.2		40	102	55	45	12	●
D106-03-10300A1 AP30P1U	10.3		40	102	55	45	12	●
D106-03-10319A1 AP30P1U	10.319	13/32"	40	102	55	45	12	○
D106-03-10400A1 AP30P1U	10.4		40	102	55	45	12	○
D106-03-10500A1 AP30P1U	10.5		40	102	55	45	12	●
D106-03-10600A1 AP30P1U	10.6		40	102	55	45	12	●
D106-03-10700A1 AP30P1U	10.7		40	102	55	45	12	○
D106-03-10716A1 AP30P1U	10.716	27/64"	40	102	55	45	12	○
D106-03-10800A1 AP30P1U	10.8		40	102	55	45	12	●
D106-03-10900A1 AP30P1U	10.9		40	102	55	45	12	○
D106-03-11000A1 AP30P1U	11		40	102	55	45	12	●
D106-03-11100A1 AP30P1U	11.1		40	102	55	45	12	○
D106-03-11113A1 AP30P1U	11.113	7/16"	40	102	55	45	12	○
D106-03-11200A1 AP30P1U	11.2		40	102	55	45	12	○
D106-03-11300A1 AP30P1U	11.3		40	102	55	45	12	○
D106-03-11400A1 AP30P1U	11.4		40	102	55	45	12	○
D106-03-11500A1 AP30P1U	11.5		40	102	55	45	12	○
D106-03-11509A1 AP30P1U	11.509	29/64"	40	102	55	45	12	○
D106-03-11550A1 AP30P1U	11.55		40	102	55	45	12	○
D106-03-11600A1 AP30P1U	11.6		40	102	55	45	12	○
D106-03-11700A1 AP30P1U	11.7		40	102	55	45	12	○
D106-03-11800A1 AP30P1U	11.8		40	102	55	45	12	●
D106-03-11900A1 AP30P1U	11.9		40	102	55	45	12	○
D106-03-11906A1 AP30P1U	11.906	15/32"	40	102	55	45	12	○
D106-03-12000A1 AP30P1U	12		40	102	55	45	12	●
D106-03-12100A1 AP30P1U	12.1		43	107	60	45	14	○
D106-03-12200A1 AP30P1U	12.2		43	107	60	45	14	○
D106-03-12250A1 AP30P1U	12.25		43	107	60	45	14	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with Internal Coolant - 3xDc

P	M	S	K	H	N	O
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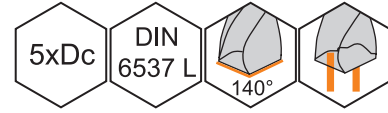
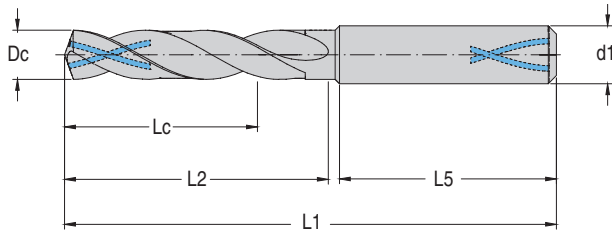


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-03-12300A1 AP30P1U	12.3		43	107	60	45	14	○
D106-03-12303A1 AP30P1U	12.303	31/64"	43	107	60	45	14	○
D106-03-12400A1 AP30P1U	12.4		43	107	60	45	14	○
D106-03-12500A1 AP30P1U	12.5		43	107	60	45	14	●
D106-03-12600A1 AP30P1U	12.6		43	107	60	45	14	○
D106-03-12700A1 AP30P1U	12.7	1/2"	43	107	60	45	14	○
D106-03-12750A1 AP30P1U	12.75		43	107	60	45	14	○
D106-03-12800A1 AP30P1U	12.8		43	107	60	45	14	○
D106-03-12900A1 AP30P1U	12.9		43	107	60	45	14	○
D106-03-13000A1 AP30P1U	13		43	107	60	45	14	●
D106-03-13100A1 AP30P1U	13.1		43	107	60	45	14	○
D106-03-13200A1 AP30P1U	13.2		43	107	60	45	14	●
D106-03-13300A1 AP30P1U	13.3		43	107	60	45	14	○
D106-03-13400A1 AP30P1U	13.4		43	107	60	45	14	○
D106-03-13494A1 AP30P1U	13.494	17/32"	43	107	60	45	14	○
D106-03-13500A1 AP30P1U	13.5		43	107	60	45	14	○
D106-03-13600A1 AP30P1U	13.6		43	107	60	45	14	○
D106-03-13700A1 AP30P1U	13.7		43	107	60	45	14	○
D106-03-13800A1 AP30P1U	13.8		43	107	60	45	14	○
D106-03-13900A1 AP30P1U	13.9		43	107	60	45	14	○
D106-03-14000A1 AP30P1U	14		43	107	60	45	14	●
D106-03-14100A1 AP30P1U	14.1		45	115	65	48	16	●
D106-03-14200A1 AP30P1U	14.2		45	115	65	48	16	●
D106-03-14288A1 AP30P1U	14.288	9/16"	45	115	65	48	16	○
D106-03-14300A1 AP30P1U	14.3		45	115	65	48	16	○
D106-03-14400A1 AP30P1U	14.4		45	115	65	48	16	○
D106-03-14500A1 AP30P1U	14.5		45	115	65	48	16	●
D106-03-14600A1 AP30P1U	14.6		45	115	65	48	16	●
D106-03-14700A1 AP30P1U	14.7		45	115	65	48	16	●
D106-03-14750A1 AP30P1U	14.75		45	115	65	48	16	○
D106-03-14800A1 AP30P1U	14.8		45	115	65	48	16	○
D106-03-15000A1 AP30P1U	15		45	115	65	48	16	●
D106-03-15100A1 AP30P1U	15.1		45	115	65	48	16	○
D106-03-15200A1 AP30P1U	15.2		45	115	65	48	16	○
D106-03-15300A1 AP30P1U	15.3		45	115	65	48	16	○
D106-03-15500A1 AP30P1U	15.5		45	115	65	48	16	●
D106-03-15600A1 AP30P1U	15.6		45	115	65	48	16	○
D106-03-15700A1 AP30P1U	15.7		45	115	65	48	16	●
D106-03-15800A1 AP30P1U	15.8		45	115	65	48	16	●
D106-03-15875A1 AP30P1U	15.875	5/8"	45	115	65	48	16	○
D106-03-15900A1 AP30P1U	15.9		45	115	65	48	16	○
D106-03-16000A1 AP30P1U	16		45	115	65	48	16	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with Internal Coolant - 5xDc

P	M	S	K	H	N	O
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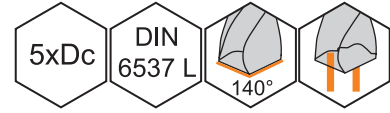
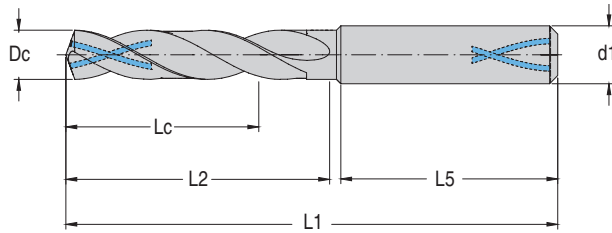
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-03000A1 AP30P1U	3		23	66	28	36	4	●
D106-05-03100A1 AP30P1U	3.1		23	66	28	36	4	●
D106-05-03175A1 AP30P1U	3.175	1/8"	23	66	28	36	4	○
D106-05-03200A1 AP30P1U	3.2		23	66	28	36	4	●
D106-05-03250A1 AP30P1U	3.25		23	66	28	36	4	○
D106-05-03300A1 AP30P1U	3.3		23	66	28	36	4	●
D106-05-03400A1 AP30P1U	3.4		23	66	28	36	4	○
D106-05-03500A1 AP30P1U	3.5		23	66	28	36	4	●
D106-05-03572A1 AP30P1U	3.572	9/64"	23	66	28	36	4	○
D106-05-03600A1 AP30P1U	3.6		23	66	28	36	4	●
D106-05-03650A1 AP30P1U	3.65		23	66	28	36	4	○
D106-05-03700A1 AP30P1U	3.7		23	66	28	36	4	●
D106-05-03800A1 AP30P1U	3.8		29	74	36	36	4	○
D106-05-03900A1 AP30P1U	3.9		29	74	36	36	4	●
D106-05-03969A1 AP30P1U	3.969	5/32"	29	74	36	36	4	○
D106-05-04000A1 AP30P1U	4		29	74	36	36	4	●
D106-05-04100A1 AP30P1U	4.1		29	74	36	36	6	○
D106-05-04200A1 AP30P1U	4.2		29	74	36	36	6	●
D106-05-04300A1 AP30P1U	4.3		29	74	36	36	6	○
D106-05-04366A1 AP30P1U	4.366	11/64"	29	74	36	36	6	○
D106-05-04400A1 AP30P1U	4.4		29	74	36	36	6	○
D106-05-04500A1 AP30P1U	4.5		29	74	36	36	6	●
D106-05-04600A1 AP30P1U	4.6		29	74	36	36	6	○
D106-05-04650A1 AP30P1U	4.65		29	74	36	36	6	○
D106-05-04700A1 AP30P1U	4.7		29	74	36	36	6	○
D106-05-04763A1 AP30P1U	4.763	3/16"	35	82	44	36	6	○
D106-05-04800A1 AP30P1U	4.8		35	82	44	36	6	●
D106-05-04900A1 AP30P1U	4.9		35	82	44	36	6	●
D106-05-05000A1 AP30P1U	5		35	82	44	36	6	●
D106-05-05100A1 AP30P1U	5.1		35	82	44	36	6	●
D106-05-05159A1 AP30P1U	5.159	13/64"	35	82	44	36	6	○
D106-05-05200A1 AP30P1U	5.2		35	82	44	36	6	●
D106-05-05300A1 AP30P1U	5.3		35	82	44	36	6	○
D106-05-05400A1 AP30P1U	5.4		35	82	44	36	6	○
D106-05-05500A1 AP30P1U	5.5		35	82	44	36	6	●
D106-05-05550A1 AP30P1U	5.55		35	82	44	36	6	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with Internal Coolant - 5xDc

P	M	S	K	H	N	O
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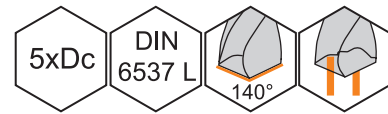
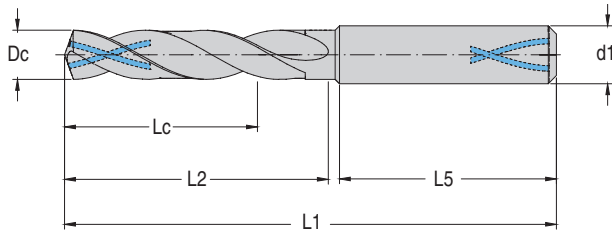


Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-05556A1 AP30P1U	5.556	7/32"	35	82	44	36	6	○
D106-05-05600A1 AP30P1U	5.6		35	82	44	36	6	○
D106-05-05700A1 AP30P1U	5.7		35	82	44	36	6	○
D106-05-05800A1 AP30P1U	5.8		35	82	44	36	6	●
D106-05-05900A1 AP30P1U	5.9		35	82	44	36	6	●
D106-05-05953A1 AP30P1U	5.953	15/64"	35	82	44	36	6	○
D106-05-06000A1 AP30P1U	6		35	82	44	36	6	●
D106-05-06100A1 AP30P1U	6.1		43	91	53	36	8	○
D106-05-06200A1 AP30P1U	6.2		43	91	53	36	8	○
D106-05-06300A1 AP30P1U	6.3		43	91	53	36	8	○
D106-05-06350A1 AP30P1U	6.35	1/4"	43	91	53	36	8	○
D106-05-06400A1 AP30P1U	6.4		43	91	53	36	8	○
D106-05-06500A1 AP30P1U	6.5		43	91	53	36	8	●
D106-05-06600A1 AP30P1U	6.6		43	91	53	36	8	○
D106-05-06700A1 AP30P1U	6.7		43	91	53	36	8	○
D106-05-06747A1 AP30P1U	6.747	17/64"	43	91	53	36	8	○
D106-05-06800A1 AP30P1U	6.8		43	91	53	36	8	●
D106-05-06900A1 AP30P1U	6.9		43	91	53	36	8	●
D106-05-07000A1 AP30P1U	7		43	91	53	36	8	●
D106-05-07100A1 AP30P1U	7.1		43	91	53	36	8	○
D106-05-07144A1 AP30P1U	7.144	9/32"	43	91	53	36	8	○
D106-05-07200A1 AP30P1U	7.2		43	91	53	36	8	○
D106-05-07300A1 AP30P1U	7.3		43	91	53	36	8	○
D106-05-07400A1 AP30P1U	7.4		43	91	53	36	8	●
D106-05-07500A1 AP30P1U	7.5		43	91	53	36	8	●
D106-05-07541A1 AP30P1U	7.541	19/64"	43	91	53	36	8	○
D106-05-07550A1 AP30P1U	7.55		43	91	53	36	8	○
D106-05-07600A1 AP30P1U	7.6		43	91	53	36	8	○
D106-05-07700A1 AP30P1U	7.7		43	91	53	36	8	○
D106-05-07800A1 AP30P1U	7.8		43	91	53	36	8	●
D106-05-07900A1 AP30P1U	7.9		43	91	53	36	8	●
D106-05-07938A1 AP30P1U	7.938	5/16"	43	91	53	36	8	○
D106-05-08000A1 AP30P1U	8		43	91	53	36	8	●
D106-05-08100A1 AP30P1U	8.1		49	103	61	40	10	○
D106-05-08200A1 AP30P1U	8.2		49	103	61	40	10	○
D106-05-08300A1 AP30P1U	8.3		49	103	61	40	10	○
D106-05-08334A1 AP30P1U	8.334	21/64"	49	103	61	40	10	○
D106-05-08400A1 AP30P1U	8.4		49	103	61	40	10	○
D106-05-08500A1 AP30P1U	8.5		49	103	61	40	10	●
D106-05-08600A1 AP30P1U	8.6		49	103	61	40	10	●
D106-05-08700A1 AP30P1U	8.7		49	103	61	40	10	○
D106-05-08731A1 AP30P1U	8.731	11/32"	49	103	61	40	10	○
D106-05-08800A1 AP30P1U	8.8		49	103	61	40	10	●
D106-05-08900A1 AP30P1U	8.9		49	103	61	40	10	●

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill D106 with Internal Coolant - 5xDc

P	M	S	K	H	N	O
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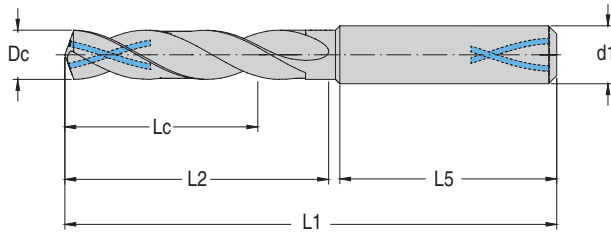
Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-09000A1 AP30P1U	9		49	103	61	40	10	●
D106-05-09100A1 AP30P1U	9.1		49	103	61	40	10	○
D106-05-09128A1 AP30P1U	9.128	23/64"	49	103	61	40	10	○
D106-05-09200A1 AP30P1U	9.2		49	103	61	40	10	○
D106-05-09300A1 AP30P1U	9.3		49	103	61	40	10	●
D106-05-09400A1 AP30P1U	9.4		49	103	61	40	10	○
D106-05-09500A1 AP30P1U	9.5		49	103	61	40	10	○
D106-05-09525A1 AP30P1U	9.525	3/8"	49	103	61	40	10	○
D106-05-09550A1 AP30P1U	9.55		49	103	61	40	10	○
D106-05-09600A1 AP30P1U	9.6		49	103	61	40	10	○
D106-05-09700A1 AP30P1U	9.7		49	103	61	40	10	○
D106-05-09800A1 AP30P1U	9.8		49	103	61	40	10	●
D106-05-09900A1 AP30P1U	9.9		49	103	61	40	10	●
D106-05-09922A1 AP30P1U	9.922	25/64"	49	103	61	40	10	○
D106-05-10000A1 AP30P1U	10		49	103	61	40	10	●
D106-05-10100A1 AP30P1U	10.1		56	118	71	45	12	●
D106-05-10200A1 AP30P1U	10.2		56	118	71	45	12	●
D106-05-10300A1 AP30P1U	10.3		56	118	71	45	12	●
D106-05-10319A1 AP30P1U	10.319	13/32"	56	118	71	45	12	○
D106-05-10400A1 AP30P1U	10.4		56	118	71	45	12	○
D106-05-10500A1 AP30P1U	10.5		56	118	71	45	12	●
D106-05-10600A1 AP30P1U	10.6		56	118	71	45	12	●
D106-05-10700A1 AP30P1U	10.7		56	118	71	45	12	○
D106-05-10716A1 AP30P1U	10.716	27/64"	56	118	71	45	12	○
D106-05-10800A1 AP30P1U	10.8		56	118	71	45	12	●
D106-05-10900A1 AP30P1U	10.9		56	118	71	45	12	○
D106-05-11000A1 AP30P1U	11		56	118	71	45	12	●
D106-05-11100A1 AP30P1U	11.1		56	118	71	45	12	○
D106-05-11113A1 AP30P1U	11.113	7/16"	56	118	71	45	12	○
D106-05-11200A1 AP30P1U	11.2		56	118	71	45	12	○
D106-05-11300A1 AP30P1U	11.3		56	118	71	45	12	○
D106-05-11400A1 AP30P1U	11.4		56	118	71	45	12	○
D106-05-11500A1 AP30P1U	11.5		56	118	71	45	12	○
D106-05-11509A1 AP30P1U	11.509	29/64"	56	118	71	45	12	○
D106-05-11550A1 AP30P1U	11.55		56	118	71	45	12	○
D106-05-11600A1 AP30P1U	11.6		56	118	71	45	12	○
D106-05-11700A1 AP30P1U	11.7		56	118	71	45	12	○
D106-05-11800A1 AP30P1U	11.8		56	118	71	45	12	●
D106-05-11900A1 AP30P1U	11.9		56	118	71	45	12	○
D106-05-11906A1 AP30P1U	11.906	15/32"	56	118	71	45	12	○
D106-05-12000A1 AP30P1U	12		56	118	71	45	12	●
D106-05-12100A1 AP30P1U	12.1		60	124	77	45	14	○
D106-05-12200A1 AP30P1U	12.2		60	124	77	45	14	○
D106-05-12250A1 AP30P1U	12.25		60	124	77	45	14	○

Marked : ● Stock available ○ Non-stocked standard

Solid Carbide Drill

Solid Carbide Drill D106 with Internal Coolant - 5xDc

P	M	S	K	H	N	O
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Product code	Dc(m7) mm	Dc inch/No.	Lc mm	L1 mm	L2 mm	L5 mm	d1(h6) mm	stock
D106-05-12300A1 AP30P1U	12.3		60	124	77	45	14	○
D106-05-12303A1 AP30P1U	12.303	31/64"	60	124	77	45	14	○
D106-05-12400A1 AP30P1U	12.4		60	124	77	45	14	○
D106-05-12500A1 AP30P1U	12.5		60	124	77	45	14	●
D106-05-12600A1 AP30P1U	12.6		60	124	77	45	14	○
D106-05-12700A1 AP30P1U	12.7	1/2"	60	124	77	45	14	○
D106-05-12750A1 AP30P1U	12.75		60	124	77	45	14	○
D106-05-12800A1 AP30P1U	12.8		60	124	77	45	14	○
D106-05-12900A1 AP30P1U	12.9		60	124	77	45	14	○
D106-05-13000A1 AP30P1U	13		60	124	77	45	14	●
D106-05-13100A1 AP30P1U	13.1		60	124	77	45	14	○
D106-05-13200A1 AP30P1U	13.2		60	124	77	45	14	●
D106-05-13300A1 AP30P1U	13.3		60	124	77	45	14	○
D106-05-13400A1 AP30P1U	13.4		60	124	77	45	14	○
D106-05-13494A1 AP30P1U	13.494	17/32"	60	124	77	45	14	○
D106-05-13500A1 AP30P1U	13.5		60	124	77	45	14	○
D106-05-13600A1 AP30P1U	13.6		60	124	77	45	14	○
D106-05-13700A1 AP30P1U	13.7		60	124	77	45	14	●
D106-05-13800A1 AP30P1U	13.8		60	124	77	45	14	○
D106-05-13900A1 AP30P1U	13.9		60	124	77	45	14	○
D106-05-14000A1 AP30P1U	14		60	124	77	45	14	●
D106-05-14100A1 AP30P1U	14.1		63	133	83	48	16	●
D106-05-14200A1 AP30P1U	14.2		63	133	83	48	16	●
D106-05-14288A1 AP30P1U	14.288	9/16"	63	133	83	48	16	○
D106-05-14300A1 AP30P1U	14.3		63	133	83	48	16	○
D106-05-14400A1 AP30P1U	14.4		63	133	83	48	16	○
D106-05-14500A1 AP30P1U	14.5		63	133	83	48	16	●
D106-05-14600A1 AP30P1U	14.6		63	133	83	48	16	●
D106-05-14700A1 AP30P1U	14.7		63	133	83	48	16	●
D106-05-14750A1 AP30P1U	14.75		63	133	83	48	16	○
D106-05-14800A1 AP30P1U	14.8		63	133	83	48	16	○
D106-05-15000A1 AP30P1U	15		63	133	83	48	16	●
D106-05-15100A1 AP30P1U	15.1		63	133	83	48	16	○
D106-05-15200A1 AP30P1U	15.2		63	133	83	48	16	○
D106-05-15300A1 AP30P1U	15.3		63	133	83	48	16	○
D106-05-15500A1 AP30P1U	15.5		63	133	83	48	16	●
D106-05-15600A1 AP30P1U	15.6		63	133	83	48	16	○
D106-05-15700A1 AP30P1U	15.7		63	133	83	48	16	●
D106-05-15800A1 AP30P1U	15.8		63	133	83	48	16	●
D106-05-15875A1 AP30P1U	15.875	5/8"	63	133	83	48	16	○
D106-05-15900A1 AP30P1U	15.9		63	133	83	48	16	○
D106-05-16000A1 AP30P1U	16		63	133	83	48	16	●

Marked : ● Stock available ○ Non-stocked standard

Cutting Data for D106 Solid Carbide Drill Family

The specified cutting data are average recommended values. For special applications, adjustment is recommended.

Vc=Cutting speed (m/min) Feed code = feed reference table see page 306				Drilling depth		3xDc				5xDc					
															
				Product family				D106		D106		D106		D106	
				Dia. Range(mm)				3.00-16.00		3.00-16.00		3.00-16.00		3.00-16.00	
Coolant				External coolant		Internal coolant		External coolant		Internal coolant					
Workpiece material				Brinell hardness (HB)	Tensile strength Rm (N/mm ²)	Vc	Feed code	Vc	Feed code	Vc	Feed code	Vc	Feed code		
P	Unalloyed steel	C≤0.25%	Annealed	125	428	80-100	F	90-115	F	80-100	F	90-115	F		
		0.25 < C≤0.55%	Annealed	190	639	70-90	E	80-100	E	70-90	E	80-100	E		
		0.25 < C≤0.55%	Heat-treated	210	708	70-90	E	80-100	E	70-90	E	80-100	E		
		C > 0.55%	Annealed	190	639	70-90	E	80-100	E	70-90	E	80-100	E		
		C > 0.55%	Heat-treated	300	1013	50-70	D	50-70	D	50-70	D	50-70	D		
		Free cutting steel (short-chipping)	Annealed	220	745	80-100	F	90-115	F	80-100	F	90-115	F		
	Low-alloyed steel	Annealed		175	591	70-100	E	80-110	E	70-100	E	80-110	E		
		Heat-treated		300	1013	50-70	D	60-70	D	50-70	D	60-70	D		
		Heat-treated		380	1282	35-45	C	40-50	C	35-45	C	40-50	C		
		Heat-treated		430	1477	30-40	B	30-40	B	30-40	B	30-40	B		
	High-alloyed steel and high-alloyed tool steel	Annealed		200	675	55-65	D	60-80	D	55-65	D	60-80	D		
		Hardened and tempered		300	1013	40-50	C	40-60	C	40-50	C	40-60	C		
		Hardened and tempered		400	1361	30-40	C	45-50	C	30-40	C	45-50	C		
	Stainless steel	Ferritic/martensitic, annealed		200	675	50-70	D	60-80	D	50-70	D	60-80	D		
		Martensitic, heat-treated		330	1114	40-50	C	40-50	C	40-50	C	40-50	C		
M	Stainless steel	Austenitic, quench hardened		200	675			40-50	C			40-50	C		
		Austenitic, precipitation hardened (PH)		300	1013	35-45	C	40-50	C	35-45	C	40-50	C		
		Austenitic/ferritic, duplex		230	778			25-35	B			25-35	B		
K	Malleable cast iron	Ferritic		200	400	70-90	G	70-90	G	70-90	G	70-90	G		
		Pearlitic		260	700	60-80	G	60-80	G	60-80	G	60-80	G		
	Grey cast iron	Low tensile strength		180	200	80-100	H	80-110	H	80-100	H	80-110	H		
		High tensile strength/austenitic		245	350	70-90	G	70-90	G	70-90	G	70-90	G		
	Cast iron with spheroidal graphite	Ferritic		155	400	80-100	G	80-110	H	80-100	G	80-110	H		
		Pearlitic		265	700	60-80	F	60-80	F	60-80	F	60-80	F		
GGV (CGI)				230	400	60-80	F	60-80	F	60-80	F	60-80	F		
N	Wrought aluminium alloys	non-aging		30	-	200-300	G	300-400	G	200-300	G	300-400	G		
		aged		100	340	200-300	G	300-400	G	200-300	G	300-400	G		
	Cast aluminium alloys	≤ 12% Si, non-aging		75	260	160-220	H	180-240	H	160-220	H	180-240	H		
		≤ 12% Si, aged		90	310	160-200	H	180-200	H	160-200	H	180-200	H		
		> 12% Si, non-aging		130	450	130-160	G	140-180	G	130-160	G	140-180	G		
	Magnesium alloys				70	250									
	Copper and copper alloys (bronze/brass)	Unalloyed, electrolytic copper		100	340	120-160	C	140-170	D	120-160	C	140-170	D		
Brass, bronze, red brass		90	310	110-140	E	120-140	E	110-140	E	120-140	E				
Cu alloys, short-chip		110	380	120-150	F	140-180	F	120-150	F	140-180	F				
High tensile, Ampco alloy		300	1010	45-60	B	45-60	B	45-60	B	45-60	B				
S	Heat-resistant alloys	Fe-based	Annealed	200	680			30-40	B			30-40	B		
			Hardened	280	940			20-25	A			20-25	A		
		Ni or Co based	Annealed	250	840			20-30	B			20-30	B		
			Hardened	350	1180			10-15	A			10-15	A		
	Titanium alloys	Cast		320	1080			15-25	A			15-25	A		
		Pure titanium		200	680	30-40	B	40-50	C	30-40	B	40-50	C		
		α and β alloys, hardened		375	1260	20-30	A	25-35	B	20-30	A	25-35	B		
β alloys		410	1400			10-15	A			10-15	A				
Tungsten alloys		1177		300	1010										
Molybdenum alloys		1262		300	1010										
H	Hardened steel	Hardened and tempered		50HRC	-	20-35	A	20-35	A	20-35	A	20-35	A		
		Hardened and tempered		55HRC	-										
		Hardened and tempered		60HRC	-										
	Hardened cast iron		Hardened and tempered		50HRC	-									