

Indexable type drill

TAF Drill

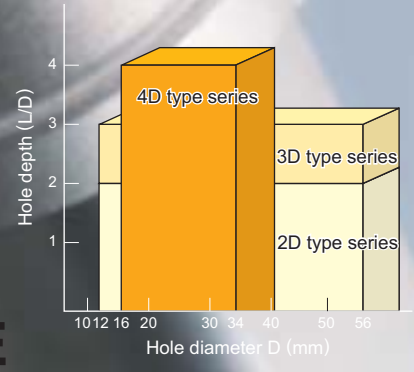
Economical. 4 cutting edges per insert.

**Low drilling noise,
Tough body.**



JUST FIT SLEEVE Stock

Allows the drill diameter to be increased in increments of 0.1mm up to a maximum of 0.5mm.



Indexable type drill

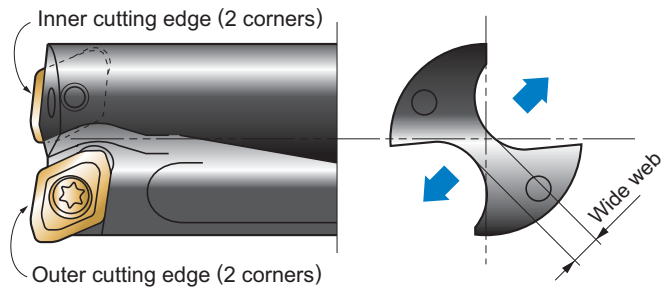
TAF Drill



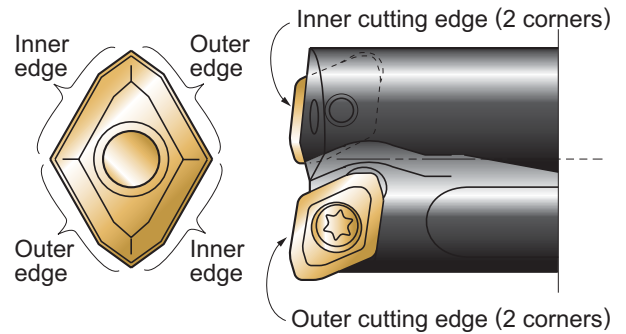
Features

Tough body

- ① The new, wider web design reduces chattering. Cutting noise is extremely low.
- ② High seat rigidity between the drill body and insert-hard to fracture.



Economical insert



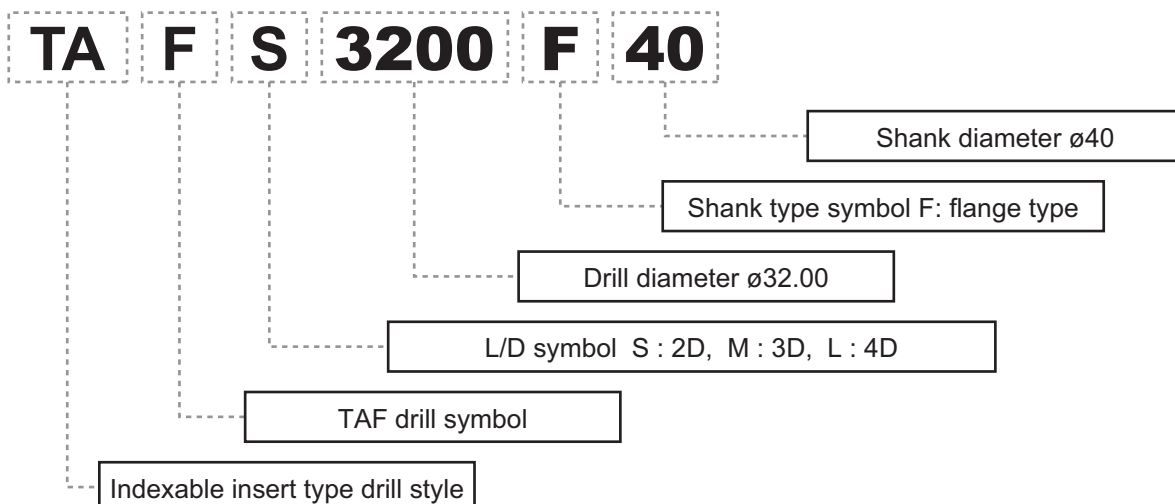
Economical use of four corners

Grad selection

Grade Breaker	UP20M		GP20M		UE6020		U5735		F5010		HTi20T	
	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT
U1	Mild steel	Mild steel										
U2			Carbon steel Alloy steel Stainless steel Cast iron Ductile cast iron						Stainless steel			
U3		Ductile cast iron				Carbon steel Alloy steel				Ductile cast iron		Cast iron

*1st recommendation shown above. Please refer to P.7 for further details.

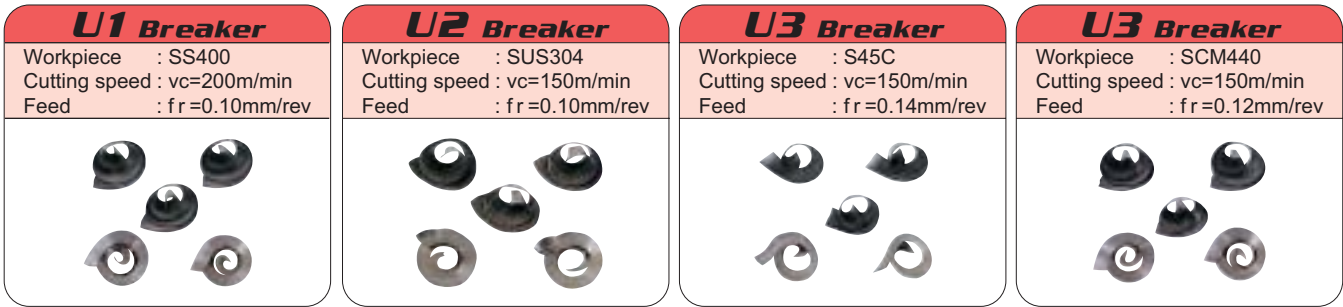
Designation



Cutting performance

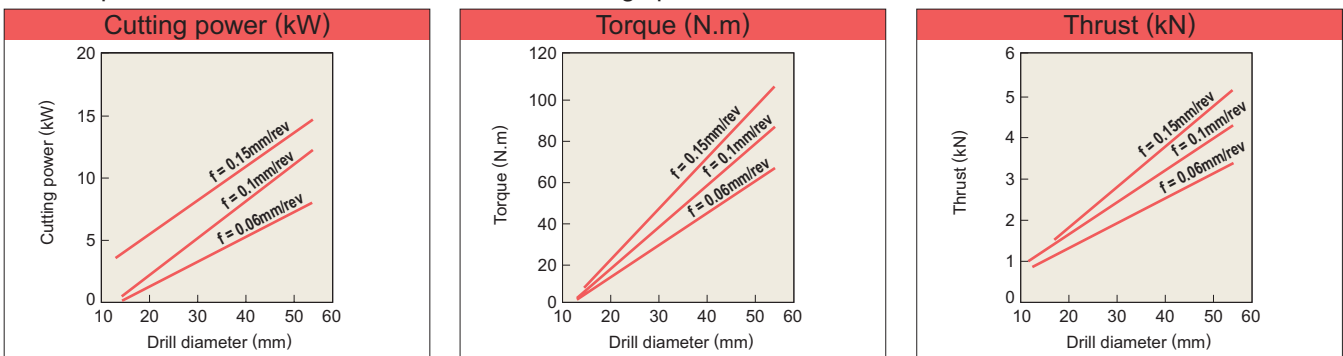
● Chip geometry

Drill diameter : $\phi 25$



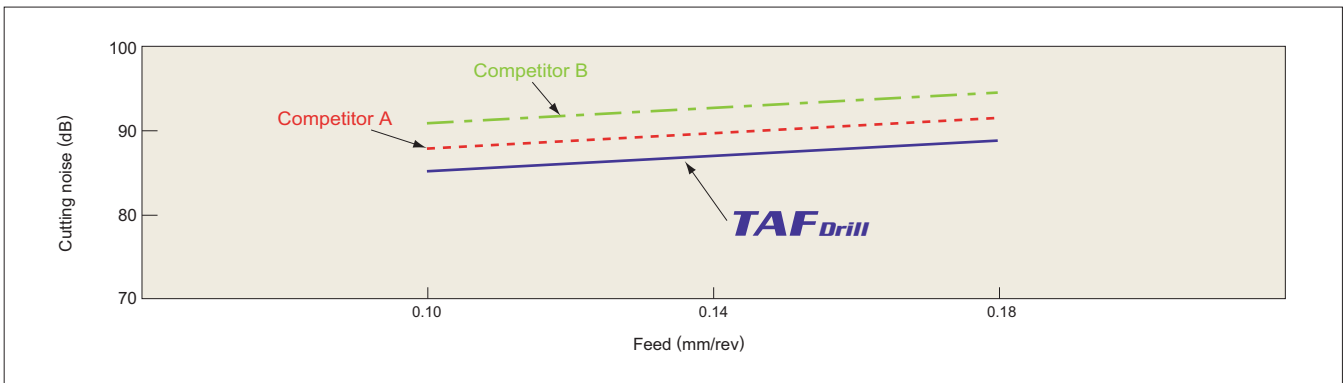
● Cutting resistance

Workpiece : JIS SCM440(200HB - 220HB) Cutting speed : 150m/min Insert : U2 Breaker



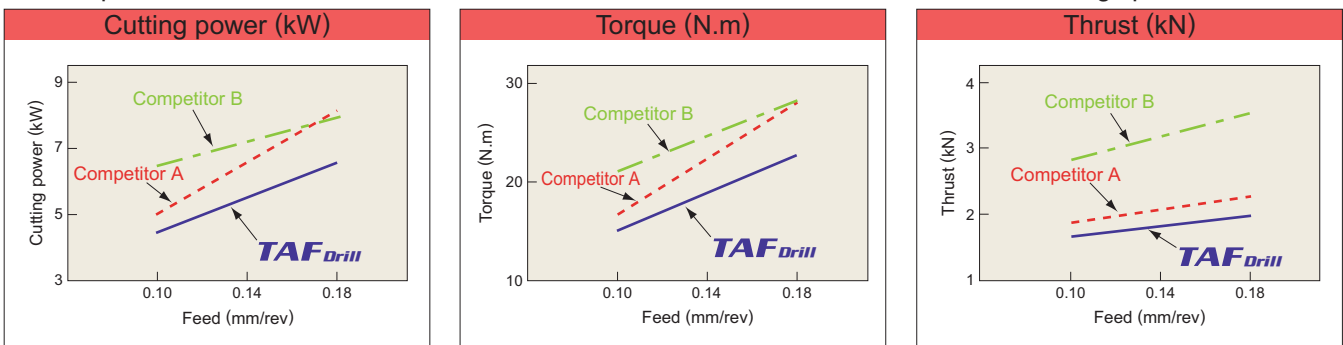
● Cutting noise

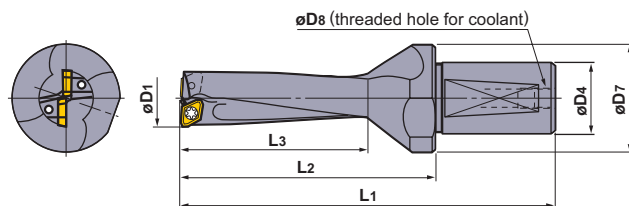
Workpiece : JIS SCM440(200HB - 220HB) Drill diameter : $\phi 25$ Insert : U2 Breaker Cutting speed : 150m/min





● Cutting resistance

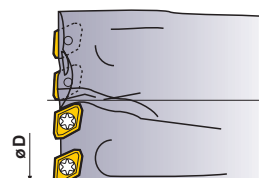
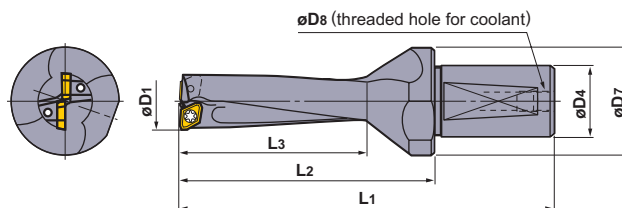
Workpiece : JIS SCM440(200HB - 220HB) Drill diameter : $\phi 25$ Insert : U3 Breaker Cutting speed : 150m/min









Drill diameter D1 (mm)	Hole depth (l/d)	Order number	Stock	Number of inserts	Dimensions (mm)						Insert order number		
					D4	D7	D8	L1	L2	L3			
12.0	2	TAFS1200F20	●	2	20	25	PT1/8	82	39	29	GCMT040204-U	TS2	TKY06F
	3	TAFM1200F20	●	2	20	25	PT1/8	94	51	41	GCMT040204-U	TS2	TKY06F
12.5	2	TAFS1250F20	●	2	20	25	PT1/8	82	39	29	GCMT040204-U	TS2	TKY06F
	3	TAFM1250F20	●	2	20	25	PT1/8	94	51	41	GCMT040204-U	TS2	TKY06F
13.0	2	TAFS1300F20	●	2	20	25	PT1/8	84	41	31	GCMT040204-U	TS2	TKY06F
	3	TAFM1300F20	●	2	20	25	PT1/8	97	54	44	GCMT040204-U	TS2	TKY06F
13.5	2	TAFS1350F20	●	2	20	25	PT1/8	84	41	31	GCMT040204-U	TS2	TKY06F
	3	TAFM1350F20	●	2	20	25	PT1/8	97	54	44	GCMT040204-U	TS2	TKY06F
14.0	2	TAFS1400F20	●	2	20	25	PT1/8	86	43	33	GCMT040204-U	TS2	TKY06F
	3	TAFM1400F20	●	2	20	25	PT1/8	100	57	47	GCMT040204-U	TS2	TKY06F
14.5	2	TAFS1450F20	●	2	20	25	PT1/8	86	43	33	GCMT040204-U	TS2	TKY06F
	3	TAFM1450F20	●	2	20	25	PT1/8	100	57	47	GCMT040204-U	TS2	TKY06F
15.0	2	TAFS1500F20	●	2	20	25	PT1/8	88	45	35	GPMT060204-U	TS2	TKY06F
	3	TAFM1500F20	●	2	20	25	PT1/8	103	60	50	GPMT060204-U	TS2	TKY06F
15.5	2	TAFS1550F20	●	2	20	25	PT1/8	88	45	35	GPMT060204-U	TS2	TKY06F
	3	TAFM1550F20	●	2	20	25	PT1/8	103	60	50	GPMT060204-U	TS2	TKY06F
16.0	2	TAFS1600F25	●	2	25	35	PT1/8	107	57	38	GPMT060204-U	TS2	TKY06F
	3	TAFM1600F25	●	2	25	35	PT1/8	123	73	54	GPMT060204-U	TS2	TKY06F
	4	TAFM1600F25	●	2	25	35	PT1/8	139	89	70	GPMT060204-U	TS2	TKY06F
16.5	2	TAFS1650F25	●	2	25	35	PT1/8	107	57	38	GPMT060204-U	TS2	TKY06F
	3	TAFM1650F25	●	2	25	35	PT1/8	123	73	54	GPMT060204-U	TS2	TKY06F
17.0	2	TAFS1700F25	●	2	25	35	PT1/8	109	59	41	GPMT060204-U	TS2	TKY06F
	3	TAFM1700F25	●	2	25	35	PT1/8	126	76	58	GPMT060204-U	TS2	TKY06F
	4	TAFM1700F25	●	2	25	35	PT1/8	143	93	75	GPMT060204-U	TS2	TKY06F
17.5	2	TAFS1750F25	●	2	25	35	PT1/8	109	59	41	GPMT060204-U	TS2	TKY06F
	3	TAFM1750F25	●	2	25	35	PT1/8	126	76	58	GPMT060204-U	TS2	TKY06F
18.0	2	TAFS1800F25	●	2	25	35	PT1/8	111	61	43	GPMT070204-U	TS25	TKY08F
	3	TAFM1800F25	●	2	25	35	PT1/8	129	79	61	GPMT070204-U	TS25	TKY08F
	4	TAFM1800F25	●	2	25	35	PT1/8	147	97	79	GPMT070204-U	TS25	TKY08F
18.5	2	TAFS1850F25	●	2	25	35	PT1/8	111	61	43	GPMT070204-U	TS25	TKY08F
	3	TAFM1850F25	●	2	25	35	PT1/8	129	79	61	GPMT070204-U	TS25	TKY08F

Drill diameter D1 (mm)	Hole depth (l/d)	Order number	Stock	Number of inserts	Dimensions (mm)						Insert order number		
					D4	D7	D8	L1	L2	L3			
19.0	2	TAFS1900F25	●	2	25	35	PT1/8	113	63	46	GPMT070204-U	TS25	①TKY08F
	3	TAFM1900F25	●	2	25	35	PT1/8	132	82	65	GPMT070204-U	TS25	①TKY08F
	4	TAFL1900F25	●	2	25	35	PT1/8	151	101	84	GPMT070204-U	TS25	①TKY08F
19.5	2	TAFS1950F25	●	2	25	35	PT1/8	113	63	46	GPMT070204-U	TS25	①TKY08F
	3	TAFM1950F25	●	2	25	35	PT1/8	132	82	65	GPMT070204-U	TS25	①TKY08F
20.0	2	TAFS2000F25	●	2	25	35	PT1/8	115	65	48	GPMT070204-U	TS25	①TKY08F
	3	TAFM2000F25	●	2	25	35	PT1/8	135	85	68	GPMT070204-U	TS25	①TKY08F
	4	TAFL2000F25	●	2	25	35	PT1/8	155	105	88	GPMT070204-U	TS25	①TKY08F
20.5	2	TAFS2050F25	●	2	25	35	PT1/8	115	65	48	GPMT070204-U	TS25	①TKY08F
	3	TAFM2050F25	●	2	25	35	PT1/8	135	85	68	GPMT070204-U	TS25	①TKY08F
21.0	2	TAFS2100F25	●	2	25	35	PT1/8	117	67	50	GPMT070204-U	TS25	①TKY08F
	3	TAFM2100F25	●	2	25	35	PT1/8	138	88	71	GPMT070204-U	TS25	①TKY08F
	4	TAFL2100F25	●	2	25	35	PT1/8	159	109	92	GPMT070204-U	TS25	①TKY08F
21.5	2	TAFS2150F25	●	2	25	35	PT1/8	117	67	50	GPMT070204-U	TS25	①TKY08F
	3	TAFM2150F25	●	2	25	35	PT1/8	138	88	71	GPMT070204-U	TS25	①TKY08F
22.0	2	TAFS2200F25	●	2	25	35	PT1/8	119	69	53	GPMT070204-U	TS25	①TKY08F
	3	TAFM2200F25	●	2	25	35	PT1/8	141	91	75	GPMT070204-U	TS25	①TKY08F
	4	TAFL2200F25	●	2	25	35	PT1/8	163	113	97	GPMT070204-U	TS25	①TKY08F
22.5	2	TAFS2250F25	●	2	25	35	PT1/8	119	69	53	GPMT070204-U	TS25	①TKY08F
	3	TAFM2250F25	●	2	25	35	PT1/8	141	91	75	GPMT070204-U	TS25	①TKY08F
23.0	2	TAFS2300F25	●	2	25	35	PT1/8	121	71	55	GPMT090304-U	TS3	①TKY08F
	3	TAFM2300F25	●	2	25	35	PT1/8	144	94	78	GPMT090304-U	TS3	①TKY08F
	4	TAFL2300F25	●	2	25	35	PT1/8	167	117	101	GPMT090304-U	TS3	①TKY08F
23.5	2	TAFS2350F25	●	2	25	35	PT1/8	121	71	55	GPMT090304-U	TS3	①TKY08F
	3	TAFM2350F25	●	2	25	35	PT1/8	144	94	78	GPMT090304-U	TS3	①TKY08F
24.0	2	TAFS2400F25	●	2	25	35	PT1/8	123	73	58	GPMT090304-U	TS3	①TKY08F
	3	TAFM2400F25	●	2	25	35	PT1/8	147	97	82	GPMT090304-U	TS3	①TKY08F
	4	TAFL2400F25	●	2	25	35	PT1/8	171	121	106	GPMT090304-U	TS3	①TKY08F
24.5	2	TAFS2450F25	●	2	25	35	PT1/8	123	73	58	GPMT090304-U	TS3	①TKY08F
	3	TAFM2450F25	●	2	25	35	PT1/8	147	97	82	GPMT090304-U	TS3	①TKY08F
25.0	2	TAFS2500F32	●	2	32	42	PT1/8	130	75	60	GPMT090304-U	TS3	①TKY08F
	3	TAFM2500F32	●	2	32	42	PT1/8	155	100	85	GPMT090304-U	TS3	①TKY08F
	4	TAFL2500F32	●	2	32	42	PT1/8	180	125	110	GPMT090304-U	TS3	①TKY08F
25.5	2	TAFS2550F32	●	2	32	42	PT1/8	130	75	60	GPMT090304-U	TS3	①TKY08F
	3	TAFM2550F32	●	2	32	42	PT1/8	155	100	85	GPMT090304-U	TS3	①TKY08F
26.0	2	TAFS2600F32	●	2	32	42	PT1/8	132	77	62	GPMT090304-U	TS3	①TKY08F
	3	TAFM2600F32	●	2	32	42	PT1/8	158	103	88	GPMT090304-U	TS3	①TKY08F
	4	TAFL2600F32	●	2	32	42	PT1/8	184	129	114	GPMT090304-U	TS3	①TKY08F
26.5	2	TAFS2650F32	●	2	32	42	PT1/8	132	77	62	GPMT090304-U	TS3	①TKY08F
	3	TAFM2650F32	●	2	32	42	PT1/8	158	103	88	GPMT090304-U	TS3	①TKY08F
27.0	2	TAFS2700F32	●	2	32	42	PT1/8	134	79	65	GPMT090304-U	TS3	①TKY08F
	3	TAFM2700F32	●	2	32	42	PT1/8	161	106	92	GPMT090304-U	TS3	①TKY08F
	4	TAFL2700F32	●	2	32	42	PT1/8	188	133	119	GPMT090304-U	TS3	①TKY08F
27.5	2	TAFS2750F32	●	2	32	42	PT1/8	134	79	65	GPMT090304-U	TS3	①TKY08F
	3	TAFM2750F32	●	2	32	42	PT1/8	161	106	92	GPMT090304-U	TS3	①TKY08F
28.0	2	TAFS2800F32	●	2	32	42	PT1/8	136	81	67	GPMT11T308-U	TS4	②TKY15D
	3	TAFM2800F32	●	2	32	42	PT1/8	164	109	95	GPMT11T308-U	TS4	②TKY15D
	4	TAFL2800F32	●	2	32	42	PT1/8	192	137	123	GPMT11T308-U	TS4	②TKY15D

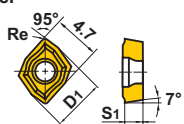
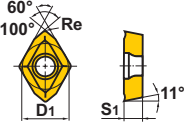

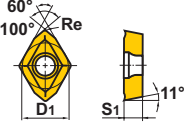
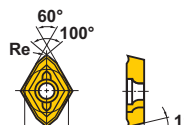


Drills between $\varnothing 49$ - $\varnothing 56$ have 4 inserts

Drill diameter D1 (mm)	Hole depth (l/d)	Order number	Stock	Number of inserts	Dimensions (mm)						Insert order number	 Clamp screw	 Wrench
					D4	D7	D8	L1	L2	L3			
28.5	2	TAFS2850F32	●	2	32	42	PT1/8	136	81	67	GPMT11T308-U	TS4	TKY15D
	3	TAFM2850F32	●	2	32	42	PT1/8	164	109	95	GPMT11T308-U	TS4	TKY15D
29.0	2	TAFS2900F32	●	2	32	42	PT1/8	138	83	70	GPMT11T308-U	TS4	TKY15D
	3	TAFM2900F32	●	2	32	42	PT1/8	167	112	99	GPMT11T308-U	TS4	TKY15D
	4	TAFM2900F32	●	2	32	42	PT1/8	196	141	128	GPMT11T308-U	TS4	TKY15D
29.5	2	TAFS2950F32	●	2	32	42	PT1/8	138	83	70	GPMT11T308-U	TS4	TKY15D
	3	TAFM2950F32	●	2	32	42	PT1/8	167	112	99	GPMT11T308-U	TS4	TKY15D
30.0	2	TAFS3000F40	●	2	40	50	PT1/4	155	90	72	GPMT11T308-U	TS4	TKY15D
	3	TAFM3000F40	●	2	40	50	PT1/4	185	120	102	GPMT11T308-U	TS4	TKY15D
	4	TAFM3000F40	●	2	40	50	PT1/4	215	150	132	GPMT11T308-U	TS4	TKY15D
31.0	2	TAFS3100F40	●	2	40	50	PT1/4	157	92	74	GPMT11T308-U	TS4	TKY15D
	3	TAFM3100F40	●	2	40	50	PT1/4	188	123	105	GPMT11T308-U	TS4	TKY15D
	4	TAFM3100F40	●	2	40	50	PT1/4	219	154	136	GPMT11T308-U	TS4	TKY15D
32.0	2	TAFS3200F40	●	2	40	50	PT1/4	159	94	77	GPMT11T308-U	TS4	TKY15D
	3	TAFM3200F40	●	2	40	50	PT1/4	191	126	109	GPMT11T308-U	TS4	TKY15D
	4	TAFM3200F40	●	2	40	50	PT1/4	223	158	141	GPMT11T308-U	TS4	TKY15D
33.0	2	TAFS3300F40	●	2	40	50	PT1/4	161	96	79	GPMT11T308-U	TS4	TKY15D
	3	TAFM3300F40	●	2	40	50	PT1/4	194	129	112	GPMT11T308-U	TS4	TKY15D
	4	TAFM3300F40	●	2	40	50	PT1/4	227	162	145	GPMT11T308-U	TS4	TKY15D
34.0	2	TAFS3400F40	●	2	40	50	PT1/4	163	98	82	GPMT11T308-U	TS4	TKY15D
	3	TAFM3400F40	●	2	40	50	PT1/4	197	132	116	GPMT11T308-U	TS4	TKY15D
	4	TAFM3400F40	●	2	40	50	PT1/4	231	166	150	GPMT11T308-U	TS4	TKY15D
35.0	2	TAFS3500F40	●	2	40	50	PT1/4	165	100	84	GPMT140408-U	TS5	TKY25D
	3	TAFM3500F40	●	2	40	50	PT1/4	200	135	119	GPMT140408-U	TS5	TKY25D
36.0	2	TAFS3600F40	●	2	40	50	PT1/4	167	102	86	GPMT140408-U	TS5	TKY25D
	3	TAFM3600F40	●	2	40	50	PT1/4	203	138	122	GPMT140408-U	TS5	TKY25D
37.0	2	TAFS3700F40	●	2	40	50	PT1/4	169	104	89	GPMT140408-U	TS5	TKY25D
	3	TAFM3700F40	●	2	40	50	PT1/4	206	141	126	GPMT140408-U	TS5	TKY25D
38.0	2	TAFS3800F40	●	2	40	50	PT1/4	171	106	91	GPMT140408-U	TS5	TKY25D
	3	TAFM3800F40	●	2	40	50	PT1/4	209	144	129	GPMT140408-U	TS5	TKY25D
39.0	2	TAFS3900F40	●	2	40	50	PT1/4	173	108	94	GPMT140408-U	TS5	TKY25D
	3	TAFM3900F40	●	2	40	50	PT1/4	212	147	133	GPMT140408-U	TS5	TKY25D

Drill diameter D ₁ (mm)	Hole depth (l/d)	Order number	Stock	Number of inserts	Dimensions (mm)						Insert order number		
					D ₄	D ₇	D ₈	L ₁	L ₂	L ₃			
40.0	2	TAFS4000F40	●	2	40	50	PT1/4	175	110	96	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4000F40	●	2	40	50	PT1/4	215	150	136	GPMT140408-U [○]	TS5	②TKY25D
41.0	2	TAFS4100F40	●	2	40	50	PT1/4	177	112	98	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4100F40	●	2	40	50	PT1/4	218	153	139	GPMT140408-U [○]	TS5	②TKY25D
42.0	2	TAFS4200F40	●	2	40	50	PT1/4	179	114	101	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4200F40	●	2	40	50	PT1/4	221	156	143	GPMT140408-U [○]	TS5	②TKY25D
43.0	2	TAFS4300F40	●	2	40	50	PT1/4	181	116	103	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4300F40	●	2	40	50	PT1/4	224	159	146	GPMT140408-U [○]	TS5	②TKY25D
44.0	2	TAFS4400F40	●	2	40	50	PT1/4	183	118	106	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4400F40	●	2	40	50	PT1/4	227	162	150	GPMT140408-U [○]	TS5	②TKY25D
45.0	2	TAFS4500F40	●	2	40	54	PT1/4	185	120	108	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4500F40	●	2	40	54	PT1/4	230	165	153	GPMT140408-U [○]	TS5	②TKY25D
46.0	2	TAFS4600F40	●	2	40	54	PT1/4	187	122	110	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4600F40	●	2	40	54	PT1/4	233	168	156	GPMT140408-U [○]	TS5	②TKY25D
47.0	2	TAFS4700F40	●	2	40	54	PT1/4	189	124	113	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4700F40	●	2	40	54	PT1/4	236	171	160	GPMT140408-U [○]	TS5	②TKY25D
48.0	2	TAFS4800F40	●	2	40	54	PT1/4	191	126	115	GPMT140408-U [○]	TS5	②TKY25D
	3	TAFM4800F40	●	2	40	54	PT1/4	239	174	163	GPMT140408-U [○]	TS5	②TKY25D
49.0	2	TAFS4900F40	●	4	40	58	PT1/4	198	133	118	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM4900F40	●	4	40	58	PT1/4	247	182	167	GPMT090304-U [○]	TS3	①TKY08F
50.0	2	TAFS5000F40	●	4	40	58	PT1/4	200	135	120	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5000F40	●	4	40	58	PT1/4	250	185	170	GPMT090304-U [○]	TS3	①TKY08F
51.0	2	TAFS5100F40	●	4	40	58	PT1/4	202	137	122	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5100F40	●	4	40	58	PT1/4	253	188	173	GPMT090304-U [○]	TS3	①TKY08F
52.0	2	TAFS5200F40	●	4	40	58	PT1/4	204	139	125	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5200F40	●	4	40	58	PT1/4	256	191	177	GPMT090304-U [○]	TS3	①TKY08F
53.0	2	TAFS5300F40	●	4	40	63	PT1/4	206	141	127	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5300F40	●	4	40	63	PT1/4	259	194	180	GPMT090304-U [○]	TS3	①TKY08F
54.0	2	TAFS5400F40	●	4	40	63	PT1/4	208	134	128	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5400F40	●	4	40	63	PT1/4	262	197	182	GPMT090304-U [○]	TS3	①TKY08F
55.0	2	TAFS5500F40	●	4	40	63	PT1/4	210	145	130	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5500F40	●	4	40	63	PT1/4	265	200	185	GPMT090304-U [○]	TS3	①TKY08F
56.0	2	TAFS5600F40	●	4	40	63	PT1/4	212	147	132	GPMT090304-U [○]	TS3	①TKY08F
	3	TAFM5600F40	●	4	40	63	PT1/4	268	203	188	GPMT090304-U [○]	TS3	①TKY08F

Standard inserts

Geometry	Drill diameters	Insert order number	Dimensions (mm)			Grade						
			D1	S1	Re	UP20M	GP20M	UE6020	US735	F5010	HTi20T	
U1 Breaker GCMT  GPMT 	ø12 - ø14.5	GCMT040204-U1	5.0	2.38	0.4	●						
	ø15 - ø17.5	GPMT060204-U1	5.56	2.38	0.4	●		●	●	●	●	●
	ø18 - ø22.5	GPMT070204-U1	6.35	2.38	0.4	●		●	●	●	●	●
	ø23 - ø27.5 ø49 - ø56	GPMT090304-U1	7.94	3.18	0.4	●		●	●	●	●	●
	ø28 - ø34	GPMT11T308-U1	9.525	3.97	0.8	●		●	●	●	●	●
	ø35 - ø48	GPMT140408-U1	12.70	4.76	0.8	●		●	●	●	●	●
U2 Breaker GCMT  GPMT 	ø12 - ø14.5	GCMT040204-U2	5.0	2.38	0.4		●					
	ø15 - ø17.5	GPMT060204-U2	5.56	2.38	0.4	●		●	●	●	●	●
	ø18 - ø22.5	GPMT070204-U2	6.35	2.38	0.4	●		●	●	●	●	●
	ø23 - ø27.5 ø49 - ø56	GPMT090304-U2	7.94	3.18	0.4	●		●	●	●	●	●
	ø28 - ø34	GPMT11T308-U2	9.525	3.97	0.8	●		●	●	●	●	●
	ø35 - ø48	GPMT140408-U2	12.70	4.76	0.8	●		●	●	●	●	●
U3 Breaker GPMT 	ø15 - ø17.5	GPMT060204-U3	5.56	2.38	0.4	●		●	●	●	●	●
	ø18 - ø22.5	GPMT070204-U3	6.35	2.38	0.4	●		●	●	●	●	●
	ø23 - ø27.5 ø49 - ø56	GPMT090304-U3	7.94	3.18	0.4	●		●	●	●	●	●
	ø28 - ø34	GPMT11T308-U3	9.525	3.97	0.8	●		●	●	●	●	●
	ø35 - ø48	GPMT140408-U3	12.70	4.76	0.8	●		●	●	●	●	●

Recommended inserts

Chip breaker recommendation

◎ : 1st recommendation ○ : 2nd recommendation

Workpiece	P						M		K			
	Mild steel		Carbon steel		Alloy steel		Stainless steel		Cast iron		Ductile cast iron	
	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT
Breaker U1	◎	◎	○	○	○	○	○	○	○	○	○	○
U2	○	○	◎	○	◎	○	◎	◎	◎	○	◎	○
U3		○		◎		◎		○		◎		◎

Insert grade recommendation

◎ : 1st recommendation ○ : 2nd recommendation

Workpiece	P						M		K			
	Mild steel		Carbon steel		Alloy steel		Stainless steel		Cast iron		Ductile cast iron	
	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT	GCMT	GPMT
UP20M	◎	◎	○	○	○	○	○	○	○	○	○	◎
GP20M	○		◎		◎		◎		◎		◎	
UE6020		○		◎		◎		○		○		○
US735		○		○		○		◎		○		○
F5010										○		◎
HTi20T										◎		

Recommended cutting conditions

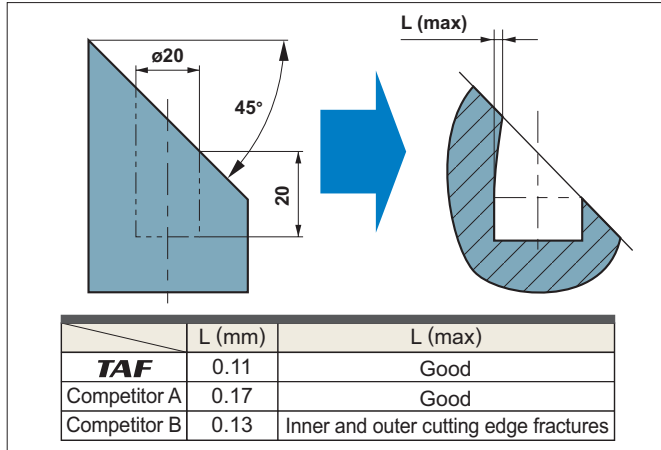
Workpiece	Hardness	Cutting speed (m/min)			Breaker	Feed (mm/rev)					
		l/d = 2 or 3		l/d = 4		Drill diameter (mm)					
		($\phi 12 - \phi 14.5$)	($\phi 15 -$)	($\phi 16 -$)		$\phi 12 - \phi 14.5$	$\phi 15 - \phi 22.5$	$\phi 23 - \phi 34$	$\phi 35 - \phi 48$	$\phi 49 - \phi 56$	
P Mild steel (JIS SS400 etc.)	$\leq 180\text{HB}$	150 (100 - 200)	200 (150 - 300)	140 (100 - 200)	U1	0.06 (0.04 - 0.10)	0.07 (0.04 - 0.10)	0.08 (0.04 - 0.10)	0.10 (0.04 - 0.12)	0.08 (0.04 - 0.10)	
					U2	0.06 (0.04 - 0.10)	0.08 (0.04 - 0.12)	0.10 (0.04 - 0.12)	0.12 (0.04 - 0.14)	0.10 (0.04 - 0.12)	
					U3	-	0.08 (0.04 - 0.12)	0.10 (0.04 - 0.12)	0.12 (0.04 - 0.14)	0.10 (0.04 - 0.12)	
	Carbon steel (JIS S45C JIS S48C etc.)	180 - 280HB	120 (80 - 160)	150 (120 - 180)	100 (80 - 120)	U1	0.06 (0.04 - 0.10)	0.09 (0.06 - 0.12)	0.12 (0.08 - 0.14)	0.15 (0.08 - 0.18)	0.12 (0.08 - 0.14)
						U2	0.06 (0.04 - 0.10)	0.12 (0.06 - 0.14)	0.14 (0.08 - 0.18)	0.17 (0.08 - 0.20)	0.14 (0.08 - 0.18)
						U3	-	0.12 (0.06 - 0.14)	0.14 (0.08 - 0.18)	0.17 (0.08 - 0.20)	0.14 (0.08 - 0.18)
	Alloy steel (JIS SCM440 JIS SCr420 etc.)	180 - 280HB	120 (80 - 160)	150 (120 - 180)	100 (80 - 120)	U1	0.06 (0.04 - 0.10)	0.08 (0.06 - 0.10)	0.09 (0.06 - 0.12)	0.11 (0.06 - 0.14)	0.09 (0.06 - 0.12)
						U2	0.06 (0.04 - 0.10)	0.10 (0.06 - 0.12)	0.12 (0.08 - 0.16)	0.14 (0.08 - 0.18)	0.12 (0.08 - 0.16)
						U3	-	0.10 (0.06 - 0.12)	0.12 (0.08 - 0.16)	0.14 (0.08 - 0.18)	0.12 (0.08 - 0.16)
M Stainless steel (JIS SUS304 JIS SUS316 etc.)	$\leq 200\text{HB}$	100 (80 - 120)	150 (120 - 200)	110 (80 - 140)	U1	0.07 (0.04 - 0.10)	0.07 (0.04 - 0.10)	0.08 (0.04 - 0.10)	0.10 (0.04 - 0.12)	0.08 (0.04 - 0.10)	
					U2	0.07 (0.04 - 0.10)	0.08 (0.04 - 0.12)	0.10 (0.04 - 0.14)	0.12 (0.04 - 0.16)	0.10 (0.04 - 0.14)	
					U3	-	0.08 (0.04 - 0.12)	0.10 (0.04 - 0.14)	0.12 (0.04 - 0.16)	0.10 (0.04 - 0.14)	
K Cast iron (JIS FC250 etc.)	Tensile strength $\leq 350\text{N/mm}^2$	120 (80 - 160)	150 (120 - 180)	140 (110 - 160)	U1	0.07 (0.06 - 0.10)	0.07 (0.06 - 0.10)	0.10 (0.04 - 0.14)	0.10 (0.06 - 0.14)	0.10 (0.06 - 0.14)	
					U2	0.07 (0.06 - 0.10)	0.15 (0.10 - 0.18)	0.20 (0.10 - 0.25)	0.20 (0.10 - 0.25)	0.20 (0.10 - 0.25)	
					U3	-	0.15 (0.10 - 0.18)	0.20 (0.10 - 0.25)	0.20 (0.10 - 0.25)	0.20 (0.10 - 0.25)	
Ductile cast iron (JIS FCD400 etc.)	Tensile strength $\leq 450\text{N/mm}^2$	120 (80 - 150)	150 (120 - 180)	100 (80 - 120)	U1	0.06 (0.04 - 0.10)	0.07 (0.06 - 0.10)	0.10 (0.06 - 0.14)	0.10 (0.06 - 0.14)	0.10 (0.06 - 0.14)	
					U2	0.06 (0.04 - 0.10)	0.12 (0.08 - 0.14)	0.15 (0.08 - 0.20)	0.18 (0.08 - 0.20)	0.15 (0.08 - 0.20)	
					U3	-	0.12 (0.08 - 0.14)	0.15 (0.08 - 0.20)	0.18 (0.08 - 0.20)	0.15 (0.08 - 0.20)	

Note : The above feed rates should be reduced to approximately 80% when using the l/d =4 drill.

Applications

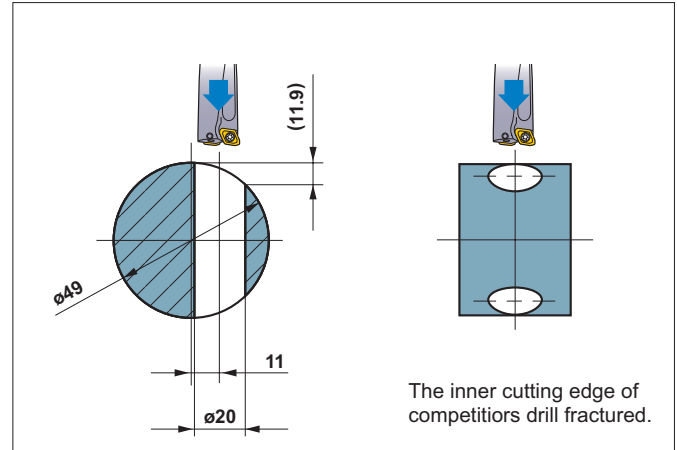
● Angle face drilling

Workpiece : JIS SCM440 (180HB - 280HB)
 Drill $\phi 20$ (3D type), Cutting speed : 80m/min Feed : 0.08mm/rev



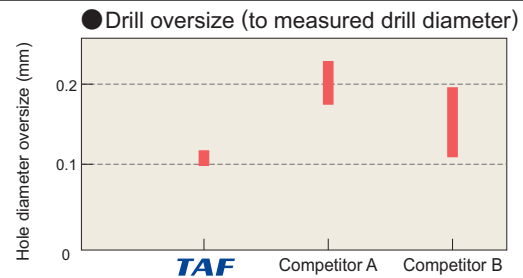
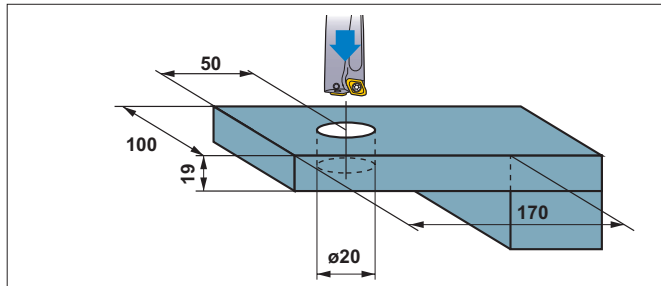
● Round workpiece drilling

Workpiece : JIS SCM440 (180HB - 280HB)
 Drill $\phi 20$ (3D type), Cutting speed : 50, 80, 100m/min
 Feed : 0.08mm/rev (initial cutting 0.05mm/rev)

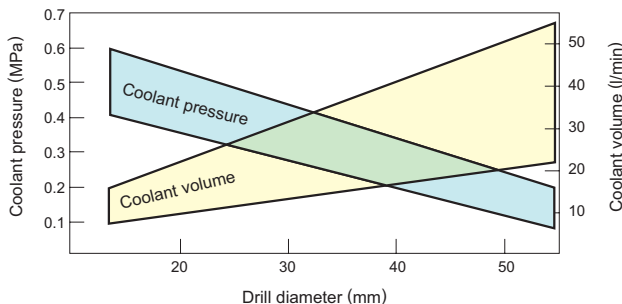


● Open sided drilling

Workpiece : JIS S50C (120HB - 180HB), Drill $\phi 20$ (3D type), Cutting speed : 80m/min Feed : 0.08mm/rev



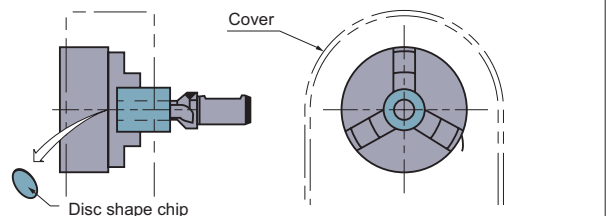
- Please ensure the highest rigidity possible exists in both machine set up and workholding.
- Refer to the following graph for coolant pressure and volume. Coolant is an important factor in the efficient use of these drills.



- Cannot be used for stack drilling. In common with many indexable insert drills, these drills produce a round disc on exit which unless evacuated may cause the drill to fracture.

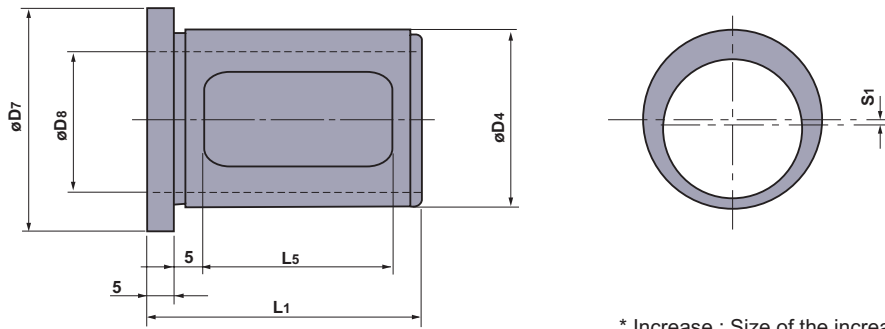
● Use on a lathe

- (1) The inner cutting edge must be positioned between 0~0.2mm over centre.
- (2) To adjust the hole diameter by off-setting the drill, the outer cutting edge and machine axis must be set parallel.
- (3) When producing an oversize hole. The drill offset should be no more than 2% of the diameter. It is not possible to produce an undersized hole.
- (4) When through hole drilling on a lathe the disc produced by the drill exiting the workpiece may be expelled at high velocity. To reduce the danger of injury or damage a cover guard is highly recommended.



JUST FIT SLEEVE

By using a sleeve the drilling diameter can be increased in increments of 0.1mm, including 0.1, 0.2, 0.3, 0.4 and 0.5mm.



* Increase : Size of the increase in the cutting diameter

Set order number	Individual order number	Stock	Dimensions (mm)					* Increase (S1 x 2)	Suitable TAF drill
			D7	$\phi D4$	$\phi D8$	L1	L5		
JFS-1	JFS2520-10	●	33	25	20	43	20	0.10	TAFS/M/L1200F20
	2520-20	●	33	25	20	43	20	0.20	
	2520-30	●	33	25	20	43	20	0.30	
	2520-40	●	33	25	20	43	20	0.40	TAFS/M/L1550F20
	2520-50	●	33	25	20	43	20	0.50	
JFS-2	JFS3225-10	●	40	32	25	50	34	0.10	TAFS/M/L1600F25
	3225-20	●	40	32	25	50	34	0.20	
	3225-30	●	40	32	25	50	34	0.30	
	3225-40	●	40	32	25	50	34	0.40	TAFS/M/L2450F25
	3225-50	●	40	32	25	50	34	0.50	
JFS-3	JFS4032-10	●	48	40	32	55	40	0.10	TAFS/M/L2500F32
	4032-20	●	48	40	32	55	40	0.20	
	4032-30	●	48	40	32	55	40	0.30	
	4032-40	●	48	40	32	55	40	0.40	TAFS/M/L2950F32
	4032-50	●	48	40	32	55	40	0.50	

Guideline for selecting

Desired ϕ = (Drill ϕ + JFS ϕ) + 0.1mm

(Eg.) Desired diameter is $\phi 20.3$ mm (oversize is taken as 0.1mm)

$\phi 20.3 = (\text{TAS/M/L2000F25} + \text{JFS3225-20}) + 0.1$



<Tool Selected>
 Drill : TAFM2000F25
 JUST FIT SLEEVE : JFS3225-20

Note : Oversize can vary due to the cutting conditions used, please use the above as a guideline.

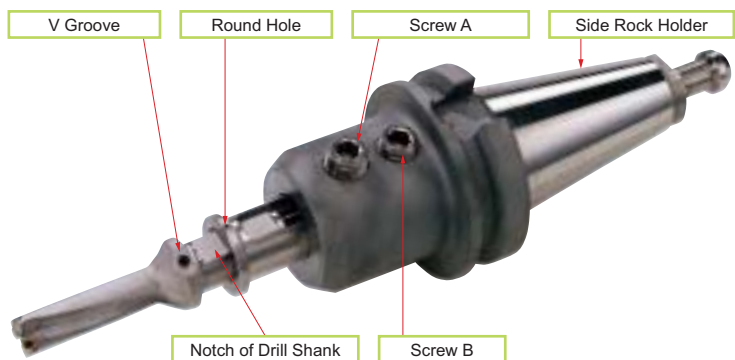
How to use

1 When inserting the drill into the side lock holder, align the V groove on the outer peripheral edge of the drill flange, as well as the round holes of the outer peripheral edge of the sleeve flange and the screws of the side lock holder for fixing the drill. (If the drill does not have a V groove, align the notch of the drill shank with the round holes of the sleeve.)

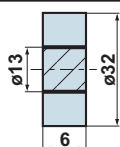
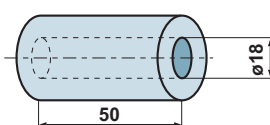
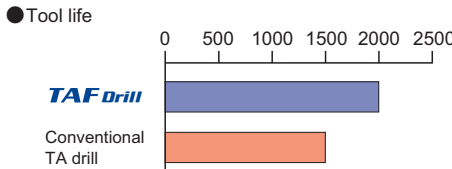
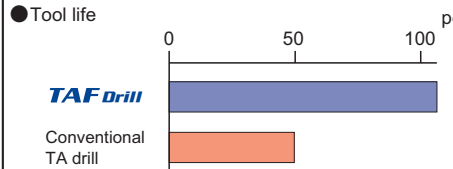
2 Insert screw A of the side lock holder directly to the open window of the sleeve and fix the drill. Tighten screw B to a degree not to damage the sleeve.

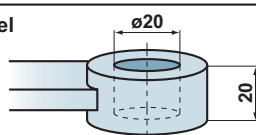
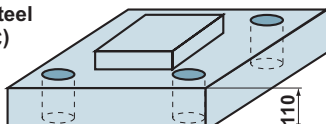
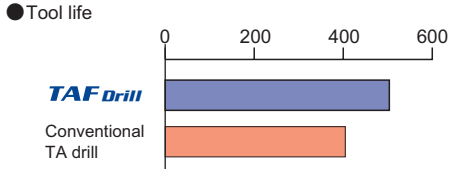
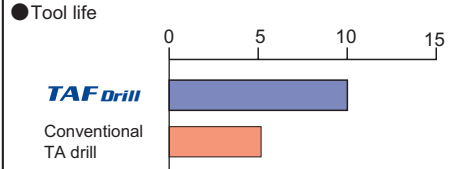
Note:

- Fine adjustments cannot be made for the diameter of the sleeve.
- Cannot be used with collet chuck type holders.



Application examples

Tool		TAFS1300F20	TAFM1800F25
Insert		GCMT040204-U2	GPMT070204-U2
Machine		NC lathe	NC lathe
Workpiece		Carbon steel (JIS S45C) 	Alloy steel (JIS SCM440) 
Cutting conditions	Cutting speed (m/min)	102	150
	Feed (mm/rev)	0.10	0.1
	Spindle speed (min ⁻¹)	2500	2653
	Feed (mm/min)	250	265
Coolant		Oil	Water soluble oil
Results		● Tool life 	● Tool life 

Tool		TAFM2000F25	TAF2800F32
Insert		GPMT070204-U2	GPMT11T308-U3
Machine		NC lathe	NC lathe
Workpiece		Carbon steel (JIS S50C) 	Carbon steel (JIS S55C) 
Cutting conditions	Cutting speed (m/min)	95	106
	Feed (mm/rev)	0.08	0.125
	Spindle speed (min ⁻¹)	1512	1205
	Feed (mm/min)	121	151
Coolant		Water soluble oil	Water soluble oil
Results		● Tool life 	● Tool life 

For Your Safety

●Don't touch breakers and chips without gloves. ●Please machine within recommended application range, and exchange expired tools with new parts in advance. ●Please use safety cover and wear safety glasses. ●When using compounded cutting oils, please take fire prevention. ●When attaching chips or spare parts, please use the attached wrench or spanner. ●When using tools in revolution machining, please make a trial run to check run-out, vibration, abnormal sounds etc.

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(Tools specifications subject to change without notice.)