





SERIES
NO.


DESCRIPTION

page

JIS REGULAR LENGTH Gold-P coated drills

	D1GP103	ดอกสว่าน Gold-P HSS (M2) รุ่่นไม้ลับปาก HSS Straight Shank, Normal point	13
	D1GP141	ดอกสว่าน Gold-P HSS (M2) รุ่่นลับปาก HSS Straight Shank, Split point	13
	D2GP191	ดอกสว่าน Gold-P HSS Co8 รุ่่นไม้ลับปาก และรุ่่นลับปาก HSS Co8 Straight Shank, Split point	16
	DLGP521	ดอกสว่าน Gold-P HSS Co5 รุ่่นลับปาก HSS Co5 Straight Shank, Split point, for Deep hole	18

ANSI JOBBER LENGTH Gold-P coated drills

	D1GP113	ดอกสว่าน Gold-P HSS (M2) รุ่่นไม้ลับปาก HSS Straight Shank, Fractional size, Normal point	15
	D1GP183	ดอกสว่าน Gold-P HSS (M2) รุ่่นลับปาก HSS Straight Shank, Fractional size, Split point	15

DRILL SET Gold-P coated drills

	D1GP141SET1	ดอกสว่าน Gold-P HSS (M2) ชุด 19 ตัว 1-10 mm	20
	D1GP141SET2	ดอกสว่าน Gold-P HSS (M2) ชุด 25 ตัว 1-13 mm	20
	D1GPSET922	ดอกสว่าน Gold-P HSS (M2) ชุด 21 ตัว 1/16" - 3/8"	20
	D1GPSET923	ดอกสว่าน Gold-P HSS (M2) ชุด 29 ตัว 1/16" - 1/2"	20
	D2GP191SET1	ดอกสว่าน Gold-P HSS Co8 ชุด 19 ตัว 1-10 mm	20
	D2GP191SET2	ดอกสว่าน Gold-P HSS Co8 ชุด 25 ตัว 1-13 mm	20

RECOMMENDED CUTTING CONDITIONS

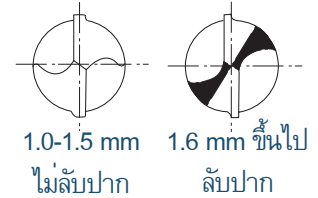
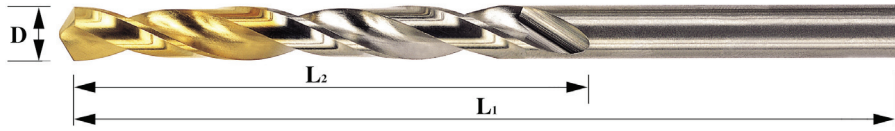
21

YG ดอกสว่าน Gold-P HSS (M2)



Cutting Data ดูหน้า 21

Flute Geometry : Right hand spiral
 Point Angle : 118°, Normal & Split point
 Surface treatment : Bright body TiN coating on working part
 Application : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



Unit : mm

รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท	รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท
YG-0101010	D1GP103010	1.0	18	40	31	YG-0101041	D1GP141041	4.1	54	83	46
YG-0101011	D1GP103011	1.1	20	42	31	YG-0101042	D1GP141042	4.2	54	83	46
YG-0101012	D1GP103012	1.2	20	42	31	YG-0101043	D1GP141043	4.3	54	83	46
YG-0101013	D1GP103013	1.3	22	45	31	YG-0101044	D1GP141044	4.4	56	86	46
YG-0101014	D1GP103014	1.4	23	48	31	YG-0101045	D1GP141045	4.5	56	86	46
YG-0101015	D1GP103015	1.5	23	48	31	YG-0101046	D1GP141046	4.6	56	86	53
YG-0101016	D1GP141016	1.6	25	50	33	YG-0101047	D1GP141047	4.7	59	89	53
YG-0101017	D1GP141017	1.7	25	50	33	YG-0101048	D1GP141048	4.8	59	89	53
YG-0101018	D1GP141018	1.8	28	52	33	YG-0101049	D1GP141049	4.9	62	92	53
YG-0101019	D1GP141019	1.9	28	52	33	YG-0101050	D1GP141050	5.0	62	92	64
YG-0101020	D1GP141020	2.0	29	55	33	YG-0101051	D1GP141051	5.1	62	92	64
YG-0101021	D1GP141021	2.1	29	55	33	YG-0101052	D1GP141052	5.2	64	95	64
YG-0101022	D1GP141022	2.2	33	58	33	YG-0101053	D1GP141053	5.3	64	95	64
YG-0101023	D1GP141023	2.3	33	58	33	YG-0101054	D1GP141054	5.4	64	95	64
YG-0101024	D1GP141024	2.4	35	61	33	YG-0101055	D1GP141055	5.5	64	95	73
YG-0101025	D1GP141025	2.5	35	61	33	YG-0101056	D1GP141056	5.6	67	98	73
YG-0101026	D1GP141026	2.6	37	64	33	YG-0101057	D1GP141057	5.7	67	98	73
YG-0101027	D1GP141027	2.7	37	64	33	YG-0101058	D1GP141058	5.8	67	98	73
YG-0101028	D1GP141028	2.8	39	67	33	YG-0101059	D1GP141059	5.9	67	98	73
YG-0101029	D1GP141029	2.9	42	71	33	YG-0101060	D1GP141060	6.0	70	102	77
YG-0101030	D1GP141030	3.0	42	71	34	YG-0101061	D1GP141061	6.1	70	102	77
YG-0101031	D1GP141031	3.1	42	71	34	YG-0101062	D1GP141062	6.2	70	102	77
YG-0101032	D1GP141032	3.2	42	71	34	YG-0101063	D1GP141063	6.3	70	102	77
YG-0101033	D1GP141033	3.3	45	73	34	YG-0101064	D1GP141064	6.4	73	105	77
YG-0101034	D1GP141034	3.4	45	73	34	YG-0101065	D1GP141065	6.5	73	105	95
YG-0101035	D1GP141035	3.5	45	73	34	YG-0101066	D1GP141066	6.6	73	105	95
YG-0101036	D1GP141036	3.6	48	76	41	YG-0101067	D1GP141067	6.7	73	105	95
YG-0101037	D1GP141037	3.7	48	76	41	YG-0101068	D1GP141068	6.8	73	105	95
YG-0101038	D1GP141038	3.8	48	76	41	YG-0101069	D1GP141069	6.9	73	105	95
YG-0101039	D1GP141039	3.9	51	79	41	YG-0101070	D1GP141070	7.0	73	105	100
YG-0101040	D1GP141040	4.0	54	83	41	YG-0101071	D1GP141071	7.1	75	108	100

YG ดอกสว่าน Gold-P HSS (M2)



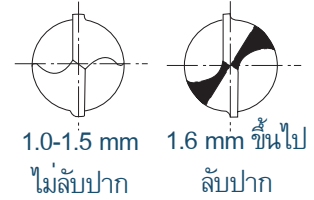
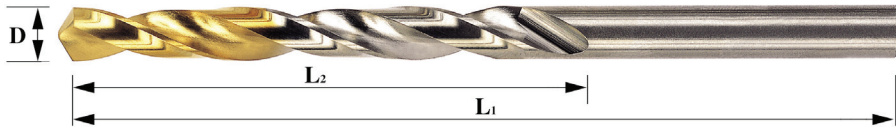
Cutting Data ดูหน้า 21

Flute Geometry : Right hand spiral

Point Angle : 118°, Normal & Split point

Surface treatment : Bright body TiN coating on working part

Application : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron



Unit: mm

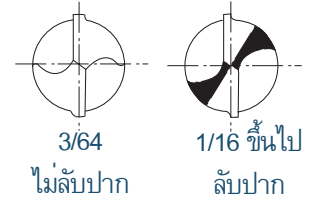
รหัสสินค้า	EDP No.	D h8	L2	L1	อื่น / บาท	รหัสสินค้า	EDP No.	D h8	L2	L1	อื่น / บาท
YG-0101072	D1GP141072	7.2	75	108	100	YG-0101102	D1GP141102	10.2	98	133	192
YG-0101073	D1GP141073	7.3	75	108	100	YG-0101103	D1GP141103	10.3	98	133	200
YG-0101074	D1GP141074	7.4	78	111	100	YG-0101104	D1GP141104	10.4	98	133	200
YG-0101075	D1GP141075	7.5	78	111	120	YG-0101105	D1GP141105	10.5	100	137	200
YG-0101076	D1GP141076	7.6	78	111	120	YG-0101106	D1GP141106	10.6	100	137	210
YG-0101077	D1GP141077	7.7	81	114	120	YG-0101107	D1GP141107	10.7	100	137	210
YG-0101078	D1GP141078	7.8	81	114	120	YG-0101108	D1GP141108	10.8	103	140	210
YG-0101079	D1GP141079	7.9	81	114	120	YG-0101109	D1GP141109	10.9	103	140	210
YG-0101080	D1GP141080	8.0	81	114	132	YG-0101110	D1GP141110	11.0	103	140	220
YG-0101081	D1GP141081	8.1	84	117	132	YG-0101111	D1GP141111	11.1	103	140	248
YG-0101082	D1GP141082	8.2	84	117	132	YG-0101112	D1GP141112	11.2	106	143	248
YG-0101083	D1GP141083	8.3	84	117	146	YG-0101113	D1GP141113	11.3	106	143	248
YG-0101084	D1GP141084	8.4	87	121	146	YG-0101114	D1GP141114	11.4	106	143	248
YG-0101085	D1GP141085	8.5	87	121	146	YG-0101115	D1GP141115	11.5	106	143	248
YG-0101086	D1GP141086	8.6	87	121	156	YG-0101116	D1GP141116	11.6	109	146	255
YG-0101087	D1GP141087	8.7	87	121	156	YG-0101117	D1GP141117	11.7	109	146	255
YG-0101088	D1GP141088	8.8	89	124	156	YG-0101118	D1GP141118	11.8	109	146	255
YG-0101089	D1GP141089	8.9	89	124	156	YG-0101119	D1GP141119	11.9	109	146	255
YG-0101090	D1GP141090	9.0	89	124	156	YG-0101120	D1GP141120	12.0	111	149	255
YG-0101091	D1GP141091	9.1	89	124	165	YG-0101121	D1GP141121	12.1	111	149	274
YG-0101092	D1GP141092	9.2	92	127	165	YG-0101122	D1GP141122	12.2	111	149	274
YG-0101093	D1GP141093	9.3	92	127	172	YG-0101123	D1GP141123	12.3	111	149	274
YG-0101094	D1GP141094	9.4	92	127	172	YG-0101124	D1GP141124	12.4	114	152	300
YG-0101095	D1GP141095	9.5	92	127	172	YG-0101125	D1GP141125	12.5	114	152	304
YG-0101096	D1GP141096	9.6	95	130	184	YG-0101126	D1GP141126	12.6	114	152	310
YG-0101097	D1GP141097	9.7	95	130	184	YG-0101127	D1GP141127	12.7	114	152	310
YG-0101098	D1GP141098	9.8	95	130	184	YG-0101128	D1GP141128	12.8	114	152	310
YG-0101099	D1GP141099	9.9	95	130	184	YG-0101129	D1GP141129	12.9	114	152	310
YG-0101100	D1GP141100	10.0	95	130	184	YG-0101130	D1GP141130	13.0	114	152	324
YG-0101101	D1GP141101	10.1	98	133	192						

YG ดอกสว่าน Gold-P HSS (M2)



Flute Geometry : Right hand spiral
 Point Angle : 118°, Normal & Split point
 Surface treatment : Bright body TiN coating on working part
 Application : Drilling in steel, cast steel alloyed and Non-alloyed, grey cast iron, graphite, malleable cast iron

Cutting Data ดูหน้า 23



Unit : inch

รหัสสินค้า	EDP No.	ขนาด	D	L2	L1	อัน / บาท
YG-0103003	D1GP113003	3/64	.0469	3/4	1.3/4	38
YG-0103004	D1GP183004	1/16	.0625	7/8	1.7/8	32
YG-0103005	D1GP183005	5/64	.0781	1	2	32
YG-0103006	D1GP183006	3/32	.0938	1.1/4	2.1/4	33
YG-0103007	D1GP183007	7/64	.1094	1.1/2	2.5/8	33
YG-0103008	D1GP183008	1/8	.1250	1.5/8	2.3/4	33
YG-0103009	D1GP183009	9/64	.1406	1.3/4	2.7/8	38
YG-0103010	D1GP183010	5/32	.1563	2	3.1/8	41
YG-0103011	D1GP183011	11/64	.1719	2.1/8	3.1/4	46
YG-0103012	D1GP183012	3/16	.1875	2.5/16	3.1/2	48
YG-0103013	D1GP183013	13/64	.2031	2.7/16	3.5/8	61
YG-0103014	D1GP183014	7/32	.2188	2.1/2	3.3/4	64
YG-0103015	D1GP183015	15/64	.2344	2.5/8	3.7/8	73
YG-0103016	D1GP183016	1/4	.2500	2.3/4	4	74
YG-0103017	D1GP183017	17/64	.2656	2.7/8	4.1/8	84
YG-0103018	D1GP183018	9/32	.2813	2.15/16	4.1/4	97
YG-0103019	D1GP183019	19/64	.2969	3.1/16	4.3/8	100
YG-0103020	D1GP183020	5/16	.3125	3.3/16	4.1/2	110
YG-0103021	D1GP183021	21/64	.3281	3.5/16	4.5/8	140
YG-0103022	D1GP183022	11/32	.3438	3.7/16	4.3/4	154
YG-0103023	D1GP183023	23/64	.3594	3.1/2	4.7/8	160
YG-0103024	D1GP183024	3/8	.3750	3.5/8	5	166
YG-0103025	D1GP183025	25/64	.3906	3.3/4	5.1/8	172
YG-0103026	D1GP183026	13/32	.4063	3.7/8	5.1/4	194
YG-0103027	D1GP183027	27/64	.4219	3.15/16	5.3/8	204
YG-0103028	D1GP183028	7/16	.4375	4.1/16	5.1/2	240
YG-0103029	D1GP183029	29/64	.4531	4.3/16	5.5/8	240
YG-0103030	D1GP183030	15/32	.4688	4.5/16	5.3/4	242
YG-0103031	D1GP183031	31/64	.4844	4.3/8	5.7/8	266
YG-0103032	D1GP183032	1/2	.5000	4.1/2	6	300

Tolerance of D

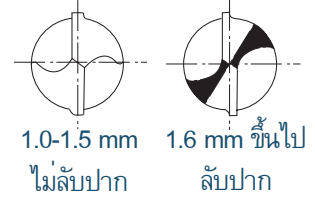
/	upto 1/8(.1250)
	0 ~ -.0005
/	over 1/8(.1250) ~ upto 1/4(.2500)
	0 ~ -.0007
/	over 1/4(.2500) ~ upto 1/2(.5000)
	0 ~ -.0010

YG ดอกสว่าน Gold-P HSS Co8



Cutting Data ดูหน้า 21

Flute Geometry : Right hand spiral
Point Angle : 135°, Normal & Split point
Surface treatment : Bright body TiN coating on working part
Application : Drilling in stainless steels, materials of difficult machinability such as titanium alloy and inconel.



Unit : mm

รหัสสินค้า	EDP No.	D h8	L2	L1	อื่น / บาท
YG-0105010	D2GP191010	1.0	18	40	70
YG-0105011	D2GP191011	1.1	20	42	70
YG-0105012	D2GP191012	1.2	20	42	70
YG-0105013	D2GP191013	1.3	22	45	70
YG-0105014	D2GP191014	1.4	23	48	70
YG-0105015	D2GP191015	1.5	23	48	70
YG-0105016	D2GP191016	1.6	25	50	70
YG-0105017	D2GP191017	1.7	25	50	70
YG-0105018	D2GP191018	1.8	28	52	70
YG-0105019	D2GP191019	1.9	28	52	70
YG-0105020	D2GP191020	2.0	29	55	70
YG-0105021	D2GP191021	2.1	29	55	70
YG-0105022	D2GP191022	2.2	33	58	70
YG-0105023	D2GP191023	2.3	33	58	70
YG-0105024	D2GP191024	2.4	35	61	70
YG-0105025	D2GP191025	2.5	35	61	70
YG-0105026	D2GP191026	2.6	37	64	70
YG-0105027	D2GP191027	2.7	37	64	70
YG-0105028	D2GP191028	2.8	39	67	70
YG-0105029	D2GP191029	2.9	42	71	70
YG-0105030	D2GP191030	3.0	42	71	70
YG-0105031	D2GP191031	3.1	42	71	75
YG-0105032	D2GP191032	3.2	42	71	75
YG-0105033	D2GP191033	3.3	45	73	75
YG-0105034	D2GP191034	3.4	45	73	75
YG-0105035	D2GP191035	3.5	45	73	75
YG-0105036	D2GP191036	3.6	48	76	100
YG-0105037	D2GP191037	3.7	48	76	100
YG-0105038	D2GP191038	3.8	48	76	100
YG-0105039	D2GP191039	3.9	51	79	100
YG-0105040	D2GP191040	4.0	54	83	100

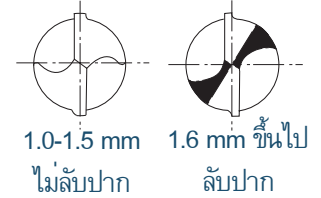
รหัสสินค้า	EDP No.	D h8	L2	L1	อื่น / บาท
YG-0105041	D2GP191041	4.1	54	83	114
YG-0105042	D2GP191042	4.2	54	83	114
YG-0105043	D2GP191043	4.3	54	83	114
YG-0105044	D2GP191044	4.4	56	86	114
YG-0105045	D2GP191045	4.5	56	86	114
YG-0105046	D2GP191046	4.6	56	86	118
YG-0105047	D2GP191047	4.7	59	89	118
YG-0105048	D2GP191048	4.8	59	89	118
YG-0105049	D2GP191049	4.9	62	92	118
YG-0105050	D2GP191050	5.0	62	92	118
YG-0105051	D2GP191051	5.1	62	92	125
YG-0105052	D2GP191052	5.2	64	95	125
YG-0105053	D2GP191053	5.3	64	95	125
YG-0105054	D2GP191054	5.4	64	95	125
YG-0105055	D2GP191055	5.5	64	95	125
YG-0105056	D2GP191056	5.6	67	98	150
YG-0105057	D2GP191057	5.7	67	98	150
YG-0105058	D2GP191058	5.8	67	98	150
YG-0105059	D2GP191059	5.9	67	98	150
YG-0105060	D2GP191060	6.0	70	102	150
YG-0105061	D2GP191061	6.1	70	102	160
YG-0105062	D2GP191062	6.2	70	102	160
YG-0105063	D2GP191063	6.3	70	102	160
YG-0105064	D2GP191064	6.4	73	105	160
YG-0105065	D2GP191065	6.5	73	105	160
YG-0105066	D2GP191066	6.6	73	105	195
YG-0105067	D2GP191067	6.7	73	105	195
YG-0105068	D2GP191068	6.8	73	105	195
YG-0105069	D2GP191069	6.9	73	105	195
YG-0105070	D2GP191070	7.0	73	105	195
YG-0105071	D2GP191071	7.1	75	108	224

YG ดอกสว่าน Gold-P HSS Co8



Cutting Data ดูหน้า 21

Flute Geometry : Right hand spiral
 Point Angle : 135°, Normal & Split point
 Surface treatment : Bright body TiN coating on working part
 Application : Drilling in stainless steels, materials of difficult machinability such as titanium alloy and inconel.



Unit : mm

รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท	รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท
YG-0105072	D2GP191072	7.2	75	108	224	YG-0105102	D2GP191102	10.2	98	133	500
YG-0105073	D2GP191073	7.3	75	108	224	YG-0105103	D2GP191103	10.3	98	133	500
YG-0105074	D2GP191074	7.4	78	111	224	YG-0105104	D2GP191104	10.4	98	133	500
YG-0105075	D2GP191075	7.5	78	111	224	YG-0105105	D2GP191105	10.5	100	137	500
YG-0105076	D2GP191076	7.6	78	111	250	YG-0105106	D2GP191106	10.6	100	137	570
YG-0105077	D2GP191077	7.7	81	114	250	YG-0105107	D2GP191107	10.7	100	137	570
YG-0105078	D2GP191078	7.8	81	114	250	YG-0105108	D2GP191108	10.8	103	140	570
YG-0105079	D2GP191079	7.9	81	114	250	YG-0105109	D2GP191109	10.9	103	140	570
YG-0105080	D2GP191080	8.0	81	114	250	YG-0105110	D2GP191110	11.0	103	140	570
YG-0105081	D2GP191081	8.1	84	117	264	YG-0105111	D2GP191111	11.1	103	140	620
YG-0105082	D2GP191082	8.2	84	117	264	YG-0105112	D2GP191112	11.2	106	143	620
YG-0105083	D2GP191083	8.3	84	117	264	YG-0105113	D2GP191113	11.3	106	143	620
YG-0105084	D2GP191084	8.4	87	121	264	YG-0105114	D2GP191114	11.4	106	143	620
YG-0105085	D2GP191085	8.5	87	121	264	YG-0105115	D2GP191115	11.5	106	143	650
YG-0105086	D2GP191086	8.6	87	121	324	YG-0105116	D2GP191116	11.6	109	146	650
YG-0105087	D2GP191087	8.7	87	121	324	YG-0105117	D2GP191117	11.7	109	146	650
YG-0105088	D2GP191088	8.8	89	124	324	YG-0105118	D2GP191118	11.8	109	146	650
YG-0105089	D2GP191089	8.9	89	124	324	YG-0105119	D2GP191119	11.9	109	146	650
YG-0105090	D2GP191090	9.0	89	124	324	YG-0105120	D2GP191120	12.0	111	149	650
YG-0105091	D2GP191091	9.1	89	124	364	YG-0105121	D2GP191121	12.1	111	149	780
YG-0105092	D2GP191092	9.2	92	127	364	YG-0105122	D2GP191122	12.2	111	149	780
YG-0105093	D2GP191093	9.3	92	127	364	YG-0105123	D2GP191123	12.3	111	149	780
YG-0105094	D2GP191094	9.4	92	127	364	YG-0105124	D2GP191124	12.4	114	152	780
YG-0105095	D2GP191095	9.5	92	127	364	YG-0105125	D2GP191125	12.5	114	152	780
YG-0105096	D2GP191096	9.6	95	130	420	YG-0105126	D2GP191126	12.6	114	152	950
YG-0105097	D2GP191097	9.7	95	130	420	YG-0105127	D2GP191127	12.7	114	152	950
YG-0105098	D2GP191098	9.8	95	130	420	YG-0105128	D2GP191128	12.8	114	152	950
YG-0105099	D2GP191099	9.9	95	130	420	YG-0105129	D2GP191129	12.9	114	152	950
YG-0105100	D2GP191100	10.0	95	130	420	YG-0105130	D2GP191130	13.0	114	152	950
YG-0105101	D2GP191101	10.1	98	133	500						

YG ดอกสว่าน Gold-P HSS Co5



Cutting Data ดูหน้า 22

Flute Geometry : Right hand spiral, 38° helix, DH100 worm pattern
Point Angle : 130°, Split point giving higher chip removal
Surface treatment : Bright body TIN coating on working part
Application : Drilling in stainless steels, materials of difficult machinability such as titanium alloy and inconel.



Unit : mm

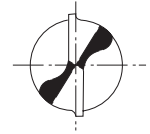
รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท	รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท
YG-0108020	DLGP521020	2.0	29	55	60	YG-0108051	DLGP521051	5.1	62	92	102
YG-0108021	DLGP521021	2.1	29	55	60	YG-0108052	DLGP521052	5.2	64	95	102
YG-0108022	DLGP521022	2.2	33	58	60	YG-0108053	DLGP521053	5.3	64	95	102
YG-0108023	DLGP521023	2.3	33	58	60	YG-0108054	DLGP521054	5.4	64	95	102
YG-0108024	DLGP521024	2.4	35	61	60	YG-0108055	DLGP521055	5.5	64	95	102
YG-0108025	DLGP521025	2.5	35	61	60	YG-0108056	DLGP521056	5.6	67	98	110
YG-0108026	DLGP521026	2.6	37	64	60	YG-0108057	DLGP521057	5.7	67	98	110
YG-0108027	DLGP521027	2.7	37	64	60	YG-0108058	DLGP521058	5.8	67	98	110
YG-0108028	DLGP521028	2.8	39	67	60	YG-0108059	DLGP521059	5.9	67	98	110
YG-0108029	DLGP521029	2.9	42	71	60	YG-0108060	DLGP521060	6.0	70	102	110
YG-0108030	DLGP521030	3.0	42	71	60	YG-0108061	DLGP521061	6.1	70	102	144
YG-0108031	DLGP521031	3.1	42	71	68	YG-0108062	DLGP521062	6.2	70	102	144
YG-0108032	DLGP521032	3.2	42	71	68	YG-0108063	DLGP521063	6.3	70	102	144
YG-0108033	DLGP521033	3.3	45	73	68	YG-0108064	DLGP521064	6.4	73	105	144
YG-0108034	DLGP521034	3.4	45	73	68	YG-0108065	DLGP521065	6.5	73	105	144
YG-0108035	DLGP521035	3.5	45	73	68	YG-0108066	DLGP521066	6.6	73	105	180
YG-0108036	DLGP521036	3.6	48	76	68	YG-0108067	DLGP521067	6.7	73	105	180
YG-0108037	DLGP521037	3.7	48	76	68	YG-0108068	DLGP521068	6.8	73	105	180
YG-0108038	DLGP521038	3.8	48	76	68	YG-0108069	DLGP521069	6.9	73	105	180
YG-0108039	DLGP521039	3.9	51	79	68	YG-0108070	DLGP521070	7.0	73	105	180
YG-0108040	DLGP521040	4.0	54	83	68	YG-0108071	DLGP521071	7.1	75	108	200
YG-0108041	DLGP521041	4.1	54	83	80	YG-0108072	DLGP521072	7.2	75	108	200
YG-0108042	DLGP521042	4.2	54	83	80	YG-0108073	DLGP521073	7.3	75	108	200
YG-0108043	DLGP521043	4.3	54	83	80	YG-0108074	DLGP521074	7.4	78	111	200
YG-0108044	DLGP521044	4.4	56	86	80	YG-0108075	DLGP521075	7.5	78	111	200
YG-0108045	DLGP521045	4.5	56	86	80	YG-0108076	DLGP521076	7.6	78	111	210
YG-0108046	DLGP521046	4.6	56	86	84	YG-0108077	DLGP521077	7.7	81	114	210
YG-0108047	DLGP521047	4.7	59	89	84	YG-0108078	DLGP521078	7.8	81	114	210
YG-0108048	DLGP521048	4.8	59	89	84	YG-0108079	DLGP521079	7.9	81	114	210
YG-0108049	DLGP521049	4.9	62	92	84	YG-0108080	DLGP521080	8.0	81	114	210
YG-0108050	DLGP521050	5.0	62	92	84	YG-0108081	DLGP521081	8.1	84	117	234

YG ดอกสว่าน Gold-P HSS Co5



Cutting Data ดูหน้า 22

Flute Geometry : Right hand spiral, 38° helix, DH100 worm pattern
Point Angle : 130°, Split point giving higher chip removal
Surface treatment : Bright body TiN coating on working part
Application : Drilling in stainless steels, materials of difficult machinability such as titanium alloy and inconel.



ลับปาก

Unit : mm

รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท	รหัสสินค้า	EDP No.	D h8	L2	L1	อัน / บาท
YG-0108082	DLGP521082	8.2	84	117	234	YG-0108107	DLGP521107	10.7	100	137	460
YG-0108083	DLGP521083	8.3	84	117	234	YG-0108108	DLGP521108	10.8	103	140	460
YG-0108084	DLGP521084	8.4	87	121	234	YG-0108109	DLGP521109	10.9	103	140	460
YG-0108085	DLGP521085	8.5	87	121	234	YG-0108110	DLGP521110	11.0	103	140	460
YG-0108086	DLGP521086	8.6	87	121	284	YG-0108111	DLGP521111	11.1	103	140	490
YG-0108087	DLGP521087	8.7	87	121	284	YG-0108112	DLGP521112	11.2	106	143	490
YG-0108088	DLGP521088	8.8	89	124	284	YG-0108113	DLGP521113	11.3	106	143	490
YG-0108089	DLGP521089	8.9	89	124	284	YG-0108114	DLGP521114	11.4	106	143	490
YG-0108090	DLGP521090	9.0	89	124	284	YG-0108115	DLGP521115	11.5	106	143	490
YG-0108091	DLGP521091	9.1	89	124	316	YG-0108116	DLGP521116	11.6	109	146	566
YG-0108092	DLGP521092	9.2	92	127	316	YG-0108117	DLGP521117	11.7	109	146	566
YG-0108093	DLGP521093	9.3	92	127	316	YG-0108118	DLGP521118	11.8	109	146	566
YG-0108094	DLGP521094	9.4	92	127	316	YG-0108119	DLGP521119	11.9	109	146	566
YG-0108095	DLGP521095	9.5	92	127	316	YG-0108120	DLGP521120	12.0	111	149	566
YG-0108096	DLGP521096	9.6	95	130	360	YG-0108121	DLGP521121	12.1	111	149	620
YG-0108097	DLGP521097	9.7	95	130	360	YG-0108122	DLGP521122	12.2	111	149	620
YG-0108098	DLGP521098	9.8	95	130	360	YG-0108123	DLGP521123	12.3	111	149	620
YG-0108099	DLGP521099	9.9	95	130	360	YG-0108124	DLGP521124	12.4	114	152	620
YG-0108100	DLGP521100	10.0	95	130	360	YG-0108125	DLGP521125	12.5	114	152	620
YG-0108101	DLGP521101	10.1	98	133	400	YG-0108126	DLGP521126	12.6	114	152	680
YG-0108102	DLGP521102	10.2	98	133	400	YG-0108127	DLGP521127	12.7	114	152	680
YG-0108103	DLGP521103	10.3	98	133	400	YG-0108128	DLGP521128	12.8	114	152	680
YG-0108104	DLGP521104	10.4	98	133	400	YG-0108129	DLGP521129	12.9	114	152	680
YG-0108105	DLGP521105	10.5	100	137	400	YG-0108130	DLGP521130	13.0	114	152	680
YG-0108106	DLGP521106	10.6	100	137	460						

Gold-P coated Drills Set



YG ดอกสว่าน Gold-P HSS (M2)

รหัสสินค้า	EDP No.	ขนาด	ชุด / บาท
YG-0102001	D1GP141SET1	ชุด 19 ตัว 1 - 10 mm	1,900
YG-0102002	D1GP141SET2	ชุด 25 ตัว 1 - 13 mm	3,490



YG ดอกสว่าน Gold-P HSS (M2)

รหัสสินค้า	EDP No.	ขนาด	ชุด / บาท
YG-0104001	D1GPSET922	ชุด 21 ตัว 1/16" - 3/8"	1,930
YG-0104002	D1GPSET923	ชุด 29 ตัว 1/16" - 1/2"	4,100



YG ดอกสว่าน Gold-P HSS-Co8

รหัสสินค้า	EDP No.	ขนาด	ชุด / บาท
YG-0106001	D2GP191SET1	ชุด 19 ตัว 1 - 10 mm	3,550
YG-0106002	D2GP191SET2	ชุด 25 ตัว 1 - 13 mm	7,770



RECOMMENDED CUTTING CONDITIONS

D1GP103, D1GP141 & D2GP191 Series

Work Material	Carbon Steels		Carbon Steels		Alloy Steels		Stainless Steels	
Hardness			~ HRc23		HRc23 ~ 34		~ HRc23	
Strength	~ 570N/mm ²		~ 830N/mm ²		830~1110N/mm ²		~ 830N/mm ²	
Diameter (mm)	N	S	N	S	N	S	N	S
1	14000	0.02	12500	0.02	7700	0.02	7000	0.02
2	7000	0.06	6100	0.06	3850	0.06	3500	0.06
3	4650	0.10	4100	0.08	2550	0.08	2350	0.08
4	3500	0.11	3050	0.11	1950	0.10	1750	0.10
5	2800	0.12	2450	0.11	1550	0.10	1400	0.10
6	2350	0.14	2050	0.13	1300	0.12	1150	0.12
7	2000	0.16	1750	0.15	1100	0.14	1000	0.14
8	1750	0.18	1550	0.18	960	0.15	875	0.15
9	1550	0.20	1350	0.22	855	0.18	780	0.18
10	1400	0.21	1250	0.22	770	0.18	700	0.18
11	1250	0.22	1100	0.22	700	0.18	650	0.18
12	1150	0.23	1000	0.22	650	0.20	585	0.20
13	1050	0.23	950	0.22	595	0.20	540	0.20

N=rev/min
S=mm/rev

D1GP103, D1GP141 & D2GP191 Series

Work Material	Titanium Alloys		Aluminum Alloys, Zinc Alloys		Magnesium Alloys	
Hardness						
Strength	~410N/mm ²					
Diameter (mm)	N	S	N	S	N	S
1	8050	0.02	30000	0.02	11500	0.03
2	4050	0.06	15000	0.06	5800	0.09
3	2700	0.08	9900	0.10	3850	0.13
4	2000	0.09	7450	0.11	2900	0.15
5	1600	0.10	5950	0.12	2300	0.17
6	1350	0.12	4950	0.14	1950	0.19
7	1150	0.14	4250	0.16	1650	0.22
8	1000	0.15	3700	0.18	1450	0.24
9	895	0.17	3300	0.20	1280	0.27
10	805	0.18	3000	0.23	1150	0.29
11	730	0.18	2700	0.23	1050	0.30
12	670	0.20	2480	0.23	960	0.31
13	620	0.20	2300	0.23	890	0.31

N=rev/min
S=mm/rev

RECOMMENDED CUTTING CONDITIONS

DLGP521 Series

Work Material	Carbon Steels Alloy Steels		Tool Steels Hardened Steels		Soft Grey Cast Iron		Hard Grey Cast Iron	
Hardness	HRc15 ~ 30		HRc20 ~ 40					
Strength	700 ~ 1000N/mm ²		800~1200N/mm ²					
Diameter (mm)	N	S	N	S	N	S	N	S
1	8750	0.02	6300	0.02	16000	0.02	9800	0.02
2	4400	0.06	3150	0.06	7900	0.07	4900	0.07
3	2900	0.08	2100	0.08	5250	0.11	3250	0.11
4	2200	0.09	1600	0.09	3950	0.14	2450	0.14
5	1750	0.10	1250	0.10	3150	0.14	1950	0.14
6	1450	0.12	1050	0.12	2650	0.18	1650	0.18
7	1250	0.14	900	0.14	2250	0.20	1400	0.20
8	1100	0.15	790	0.15	1950	0.22	1250	0.22
9	975	0.17	700	0.17	1750	0.24	1100	0.24
10	875	0.18	630	0.18	1600	0.28	980	0.28
11	800	0.20	575	0.20	1450	0.28	890	0.28
12	730	0.20	525	0.20	1300	0.28	815	0.28
13	675	0.20	485	0.20	1200	0.28	755	0.28

N=rev/min
S=mm/rev

RECOMMENDED CUTTING CONDITIONS

D1GP113 & D1GP183 Series

Work Material	Carbon Steels		Carbon Steels		Alloy Steels		Stainless Steels	
	~ 570N/mm ²		~ 830N/mm ²		830~1110N/mm ²		~ 830N/mm ²	
Hardness			~ HRc23		HRc23 ~ 34		~ HRc23	
Strength								
Diameter (inch)	N	S	N	S	N	S	N	S
3/64(.0469)	14000	0.0008	12500	0.0008	7700	0.0008	7000	0.0008
#47(.0785)	7000	0.0023	6100	0.0024	3850	0.0024	3500	0.0024
#32(.1160)	4650	0.0038	4100	0.0031	2550	0.0031	2350	0.0031
#22(.1570)	3500	0.0044	3050	0.0043	1950	0.0039	1750	0.0039
#9(.1960)	2800	0.0049	2450	0.0043	1550	0.0039	1400	0.0039
B(.2380)	2350	0.0056	2050	0.0051	1300	0.0047	1150	0.0047
J(.2770)	2000	0.0064	1750	0.0059	1100	0.0055	1000	0.0055
O(.3160)	1750	0.0072	1550	0.0071	960	0.0059	875	0.0059
T(.3580)	1550	0.0077	1350	0.0087	855	0.0071	780	0.0071
X(.3970)	1400	0.0084	1250	0.0087	770	0.0071	700	0.0071
7/16(.4375)	1250	0.0087	1100	0.0087	700	0.0071	650	0.0071
15/32(.4688)	1150	0.0090	1000	0.0087	650	0.0079	585	0.0079
1/2(.5000)	1050	0.0090	950	0.0087	595	0.0079	540	0.0079

N=rev/min
S=inch/rev

D1GP113 & D1GP183 Series

Work Material	Titanium Alloys		Aluminum Alloys, Zinc Alloys		Magnesium Alloys	
	~410N/mm ²					
Hardness						
Strength						
Diameter (inch)	N	S	N	S	N	S
3/64(.0469)	8050	0.0008	30000	0.0008	11500	0.0012
#47(.0785)	4050	0.0024	15000	0.0023	5800	0.0035
#32(.1160)	2700	0.0031	9900	0.0038	3850	0.0051
#22(.1570)	2000	0.0035	7450	0.0044	2900	0.0059
#9(.1960)	1600	0.0039	5950	0.0049	2300	0.0067
B(.2380)	1350	0.0047	4950	0.0056	1950	0.0075
J(.2770)	1150	0.0055	4250	0.0064	1650	0.0087
O(.3160)	1000	0.0059	3700	0.0072	1450	0.0094
T(.3580)	895	0.0067	3300	0.0079	1280	0.0106
X(.3970)	805	0.0071	3000	0.0090	1150	0.0114
7/16(.4375)	730	0.0071	2700	0.0090	1050	0.0118
15/32(.4688)	670	0.0079	2480	0.0090	960	0.0122
1/2(.5000)	620	0.0079	2300	0.0090	890	0.0122

N=rev/min
S=inch/rev

TWIST DRILLS

SOLID CARBIDE
& HIGH SPEED STEEL



TWIST DRILLS

SELECTION GUIDE




HSS, STRAIGHT SHANK DRILLS

HSS Drills for soft materials

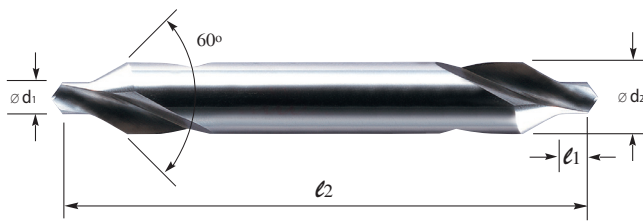
	DV301	ดอกเจาะหน้าศูนย์ HSS HSS-EX CENTER DRILLS	P. 26
	D1192	ดอกสว่าน HSS ยาว 150 mm HSS STRAIGHT SHANK DRILLS, LONG LENGTH, 150 mm	P. 27
	D1192	ดอกสว่าน HSS ยาว 200 mm HSS STRAIGHT SHANK DRILLS, LONG LENGTH, 200 mm	P. 28
	D1192	ดอกสว่าน HSS ยาว 250 mm HSS STRAIGHT SHANK DRILLS, LONG LENGTH, 250 mm	P. 29
	D1192	ดอกสว่าน HSS ยาว 300 mm HSS STRAIGHT SHANK DRILLS, LONG LENGTH, 300 mm	P. 30

SOLID CARBIDE DRILLS

For General materials, cast steel, cast iron, non-ferrous materials

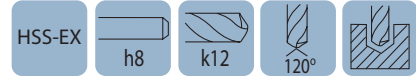
	D5405	ดอกสว่านคาร์ไบด์ STUB CARBIDE DRILLS, STUB LENGTH - DIN6539	P. 31
	DH405	ดอกสว่านคาร์ไบด์ STUB ชูบ TiAIN CARBIDE DRILLS, STUB LENGTH - DIN6539, TiAIN	P. 33
	D5407	ดอกสว่านคาร์ไบด์ JOBBER CARBIDE DRILLS, JOBBER LENGTH - DIN338	P. 35

YG ดอกเจาะนำศูนย์ HSS



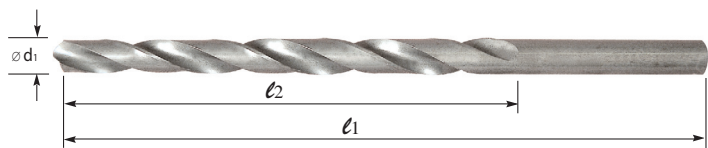
SERIES DV301

Application: Center Drills suitable for center drilling and chamfering in general materials.
Excellent performance with High Vanadium HSS-EX and YG-1's unique design technology.



รหัสสินค้า	EDP No.	Drill Diameter d1	Shank Diameter d2	Pilot Length l_1	Overall Length l_2	อัน / บาท
YG-0301010	DV301010	1.0	4.0	1.0	35	170
YG-0301015	DV301015	1.5	5.0	1.5	40	170
YG-0301020	DV301020	2.0	6.0	2.0	45	170
YG-0301025	DV301025	2.5	7.7	2.5	50	190
YG-0301030	DV301030	3.0	7.7	3.0	55	200
YG-0301040	DV301040	4.0	10.0	4.5	65	450
YG-0301050	DV301050	5.0	11.0	5.5	78	550

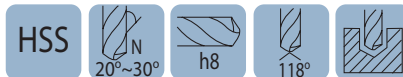
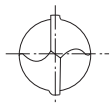
YG ดอกสว่าน HSS ยาว 150 MM



SERIES D1192

Application : Designed for drilling deep holes or deeply located holes. Drills in steel, cast steel alloyed and non-alloyed, grey cast iron, malleable cast iron graphite.

การใช้งาน : ใช้สำหรับเจาะรูลึก เหมาะสำหรับเจาะเหล็ก, cast steel alloyed และ non-alloyed, grey cast iron, รวมทั้ง malleable cast iron graphite



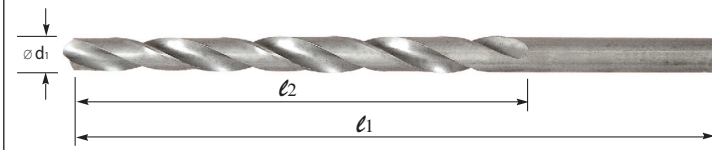
Unit : mm

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0501320	D1192320	2.0	100	150	150
YG-0501321	D1192321	2.1	100	150	• 150
YG-0501322	D1192322	2.2	100	150	• 150
YG-0501323	D1192323	2.3	100	150	• 150
YG-0501324	D1192324	2.4	100	150	• 155
YG-0501325	D1192325	2.5	100	150	155
YG-0501326	D1192326	2.6	100	150	• 155
YG-0501327	D1192327	2.7	100	150	• 155
YG-0501328	D1192328	2.8	100	150	• 165
YG-0501329	D1192329	2.9	100	150	• 165
YG-0501330	D1192330	3.0	100	150	165
YG-0501331	D1192331	3.1	100	150	• 165
YG-0501332	D1192332	3.2	100	150	• 170
YG-0501333	D1192333	3.3	100	150	• 170
YG-0501334	D1192334	3.4	100	150	• 170
YG-0501335	D1192335	3.5	100	150	170
YG-0501336	D1192336	3.6	100	150	• 180
YG-0501337	D1192337	3.7	100	150	• 180
YG-0501338	D1192338	3.8	100	150	• 180
YG-0501339	D1192339	3.9	100	150	• 180
YG-0501340	D1192340	4.0	100	150	190
YG-0501341	D1192341	4.1	100	150	• 190
YG-0501342	D1192342	4.2	100	150	• 190
YG-0501343	D1192343	4.3	100	150	• 190
YG-0501344	D1192344	4.4	100	150	• 210
YG-0501345	D1192345	4.5	100	150	210
YG-0501346	D1192346	4.6	100	150	• 210
YG-0501347	D1192347	4.7	100	150	• 210
YG-0501348	D1192348	4.8	100	150	• 230
YG-0501349	D1192349	4.9	100	150	• 230
YG-0501350	D1192350	5.0	100	150	230
YG-0501351	D1192351	5.1	100	150	• 230
YG-0501352	D1192352	5.2	100	150	• 244
YG-0501353	D1192353	5.3	100	150	• 244
YG-0501354	D1192354	5.4	100	150	• 244
YG-0501355	D1192355	5.5	100	150	244
YG-0501356	D1192356	5.6	100	150	• 250
YG-0501357	D1192357	5.7	100	150	• 250
YG-0501358	D1192358	5.8	100	150	• 250
YG-0501359	D1192359	5.9	100	150	• 250

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0501360	D1192360	6.0	100	150	260
YG-0501361	D1192361	6.1	100	150	• 260
YG-0501362	D1192362	6.2	100	150	• 260
YG-0501363	D1192363	6.3	100	150	• 260
YG-0501364	D1192364	6.4	100	150	• 260
YG-0501365	D1192365	6.5	100	150	290
YG-0501366	D1192366	6.6	100	150	• 290
YG-0501367	D1192367	6.7	100	150	• 290
YG-0501368	D1192368	6.8	100	150	• 310
YG-0501369	D1192369	6.9	100	150	• 310
YG-0501370	D1192370	7.0	100	150	310
YG-0501371	D1192371	7.1	100	150	• 310
YG-0501372	D1192372	7.2	100	150	• 340
YG-0501373	D1192373	7.3	100	150	• 340
YG-0501374	D1192374	7.4	100	150	• 340
YG-0501375	D1192375	7.5	100	150	340
YG-0501376	D1192376	7.6	100	150	• 350
YG-0501377	D1192377	7.7	100	150	• 350
YG-0501378	D1192378	7.8	100	150	• 350
YG-0501379	D1192379	7.9	100	150	• 350
YG-0501380	D1192380	8.0	100	150	375
YG-0501382	D1192382	8.2	100	150	• 375
YG-0501384	D1192384	8.4	100	150	• 400
YG-0501385	D1192385	8.5	100	150	400
YG-0501386	D1192386	8.6	100	150	• 400
YG-0501388	D1192388	8.8	100	150	• 430
YG-0501390	D1192390	9.0	100	150	430
YG-0501392	D1192392	9.2	100	150	• 440
YG-0501394	D1192394	9.4	100	150	• 440
YG-0501395	D1192395	9.5	100	150	440
YG-0501396	D1192396	9.6	100	150	• 480
YG-0501398	D1192398	9.8	100	150	• 480
YG-0501600	D1192600	10.0	100	150	530
YG-0501602	D1192602	10.2	100	150	• 530
YG-0501604	D1192604	10.4	100	150	• 580
YG-0501605	D1192605	10.5	100	150	580
YG-0501606	D1192606	10.6	100	150	• 580
YG-0501608	D1192608	10.8	100	150	• 620
YG-0501610	D1192610	11.0	100	150	620

• Order

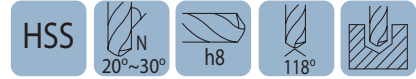
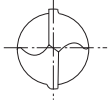
YG ดอกสว่าน HSS ยาว 200 MM



SERIES D1192

Application : Designed for drilling deep holes or deeply located holes. Drills in steel, cast steel alloyed and non-alloyed, grey cast iron, malleable cast iron graphite.

การใช้งาน : ใช้สำหรับเจาะรูลึก เหมาะสำหรับเจาะเหล็ก, cast steel alloyed และ non-alloyed, grey cast iron, รวมทั้ง malleable cast iron graphite



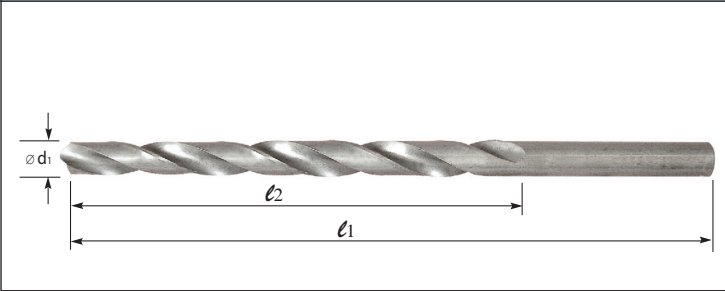
Unit : mm

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0502420	D1192420	2.0	150	200	200
YG-0502422	D1192422	2.2	150	200	• 200
YG-0502424	D1192424	2.4	150	200	• 210
YG-0502425	D1192425	2.5	150	200	210
YG-0502427	D1192427	2.7	150	200	• 210
YG-0502428	D1192428	2.8	150	200	• 220
YG-0502429	D1192429	2.9	150	200	• 220
YG-0502430	D1192430	3.0	150	200	220
YG-0502432	D1192432	3.2	150	200	• 230
YG-0502434	D1192434	3.4	150	200	• 230
YG-0502435	D1192435	3.5	150	200	230
YG-0502436	D1192436	3.6	150	200	• 250
YG-0502437	D1192437	3.7	150	200	• 250
YG-0502438	D1192438	3.8	150	200	• 250
YG-0502439	D1192439	3.9	150	200	• 250
YG-0502440	D1192440	4.0	150	200	255
YG-0502441	D1192441	4.1	150	200	• 255
YG-0502442	D1192442	4.2	150	200	• 255
YG-0502443	D1192443	4.3	150	200	• 255
YG-0502444	D1192444	4.4	150	200	• 280
YG-0502445	D1192445	4.5	150	200	280
YG-0502446	D1192446	4.6	150	200	• 280
YG-0502447	D1192447	4.7	150	200	• 280
YG-0502448	D1192448	4.8	150	200	• 300
YG-0502449	D1192449	4.9	150	200	• 300
YG-0502450	D1192450	5.0	150	200	300
YG-0502451	D1192451	5.1	150	200	• 300
YG-0502452	D1192452	5.2	150	200	• 310
YG-0502453	D1192453	5.3	150	200	• 310
YG-0502454	D1192454	5.4	150	200	• 310
YG-0502455	D1192455	5.5	150	200	310
YG-0502456	D1192456	5.6	150	200	• 330
YG-0502457	D1192457	5.7	150	200	• 330
YG-0502458	D1192458	5.8	150	200	• 330
YG-0502459	D1192459	5.9	150	200	• 330
YG-0502460	D1192460	6.0	150	200	340
YG-0502461	D1192461	6.1	150	200	• 340
YG-0502462	D1192462	6.2	150	200	• 340
YG-0502463	D1192463	6.3	150	200	• 340
YG-0502464	D1192464	6.4	150	200	• 380
YG-0502465	D1192465	6.5	150	200	380
YG-0502466	D1192466	6.6	150	200	• 380
YG-0502467	D1192467	6.7	150	200	• 380
YG-0502468	D1192468	6.8	150	200	• 410
YG-0502469	D1192469	6.9	150	200	• 410
YG-0502470	D1192470	7.0	150	200	410
YG-0502471	D1192471	7.1	150	200	• 410

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0502472	D1192472	7.2	150	200	• 440
YG-0502473	D1192473	7.3	150	200	• 440
YG-0502474	D1192474	7.4	150	200	• 440
YG-0502475	D1192475	7.5	150	200	440
YG-0502476	D1192476	7.6	150	200	• 460
YG-0502477	D1192477	7.7	150	200	• 460
YG-0502478	D1192478	7.8	150	200	• 460
YG-0502479	D1192479	7.9	150	200	• 460
YG-0502480	D1192480	8.0	150	200	500
YG-0502481	D1192481	8.1	150	200	• 500
YG-0502482	D1192482	8.2	150	200	• 500
YG-0502483	D1192483	8.3	150	200	• 500
YG-0502484	D1192484	8.4	150	200	• 530
YG-0502485	D1192485	8.5	150	200	530
YG-0502486	D1192486	8.6	150	200	• 530
YG-0502487	D1192487	8.7	150	200	• 530
YG-0502488	D1192488	8.8	150	200	• 560
YG-0502489	D1192489	8.9	150	200	• 560
YG-0502490	D1192490	9.0	150	200	560
YG-0502491	D1192491	9.1	150	200	• 560
YG-0502492	D1192492	9.2	150	200	• 575
YG-0502493	D1192493	9.3	150	200	• 575
YG-0502494	D1192494	9.4	150	200	• 575
YG-0502495	D1192495	9.5	150	200	580
YG-0502496	D1192496	9.6	150	200	• 630
YG-0502497	D1192497	9.7	150	200	• 630
YG-0502498	D1192498	9.8	150	200	• 630
YG-0502499	D1192499	9.9	150	200	• 630
YG-0502700	D1192700	10.0	150	200	720
YG-0502702	D1192702	10.2	150	200	• 720
YG-0502704	D1192704	10.4	150	200	• 780
YG-0502705	D1192705	10.5	150	200	780
YG-0502706	D1192706	10.6	150	200	• 780
YG-0502708	D1192708	10.8	150	200	• 830
YG-0502710	D1192710	11.0	150	200	830
YG-0502712	D1192712	11.2	150	200	• 860
YG-0502714	D1192714	11.4	150	200	• 860
YG-0502715	D1192715	11.5	150	200	860
YG-0502716	D1192716	11.6	150	200	• 900
YG-0502718	D1192718	11.8	150	200	• 900
YG-0502720	D1192720	12.0	150	200	940
YG-0502722	D1192722	12.2	150	200	• 940
YG-0502724	D1192724	12.4	150	200	• 970
YG-0502725	D1192725	12.5	150	200	970
YG-0502726	D1192726	12.6	150	200	• 970
YG-0502728	D1192728	12.8	150	200	• 1,000
YG-0502730	D1192730	13.0	150	200	1,000

• Order

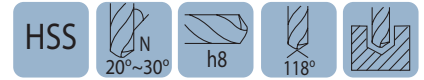
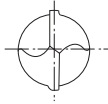
YG ดอกสว่าน HSS ยาว 250 MM



SERIES D1192

Application : Designed for drilling deep holes or deeply located holes. Drills in steel, cast steel alloyed and non-alloyed, grey cast iron, malleable cast iron graphite.

การใช้งาน : ใช้สำหรับเจาะรูลึก เหมาะสำหรับเจาะเหล็ก, cast steel alloyed และ non-alloyed, grey cast iron, รวมถึง malleable cast iron graphite



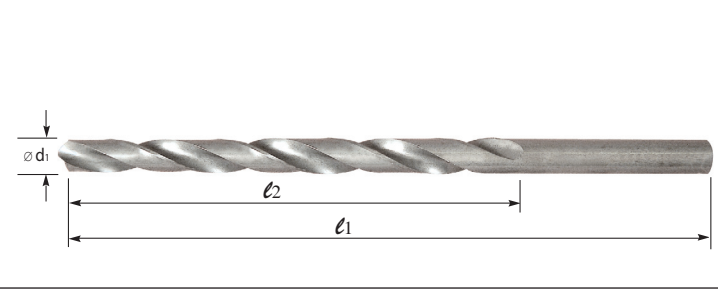
Unit : mm

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0503536	D1192536	3.6	200	250	• 300
YG-0503540	D1192540	4.0	200	250	310
YG-0503544	D1192544	4.4	200	250	• 340
YG-0503545	D1192545	4.5	200	250	340
YG-0503546	D1192546	4.6	200	250	• 340
YG-0503548	D1192548	4.8	200	250	• 380
YG-0503550	D1192550	5.0	200	250	380
YG-0503551	D1192551	5.1	200	250	• 380
YG-0503552	D1192552	5.2	200	250	• 390
YG-0503553	D1192553	5.3	200	250	• 390
YG-0503554	D1192554	5.4	200	250	• 390
YG-0503555	D1192555	5.5	200	250	390
YG-0503556	D1192556	5.6	200	250	• 400
YG-0503558	D1192558	5.8	200	250	• 400
YG-0503560	D1192560	6.0	200	250	430
YG-0503561	D1192561	6.1	200	250	• 430
YG-0503562	D1192562	6.2	200	250	• 430
YG-0503563	D1192563	6.3	200	250	• 430
YG-0503564	D1192564	6.4	200	250	• 480
YG-0503565	D1192565	6.5	200	250	480
YG-0503566	D1192566	6.6	200	250	• 480
YG-0503567	D1192567	6.7	200	250	• 480
YG-0503568	D1192568	6.8	200	250	• 520
YG-0503569	D1192569	6.9	200	250	• 520
YG-0503570	D1192570	7.0	200	250	520
YG-0503571	D1192571	7.1	200	250	• 520
YG-0503572	D1192572	7.2	200	250	• 560
YG-0503573	D1192573	7.3	200	250	• 560
YG-0503574	D1192574	7.4	200	250	• 560
YG-0503575	D1192575	7.5	200	250	560
YG-0503576	D1192576	7.6	200	250	• 580
YG-0503577	D1192577	7.7	200	250	• 580
YG-0503578	D1192578	7.8	200	250	• 580
YG-0503579	D1192579	7.9	200	250	• 580
YG-0503580	D1192580	8.0	200	250	620
YG-0503581	D1192581	8.1	200	250	• 620
YG-0503582	D1192582	8.2	200	250	• 620
YG-0503583	D1192583	8.3	200	250	• 620
YG-0503584	D1192584	8.4	200	250	• 660
YG-0503585	D1192585	8.5	200	250	660
YG-0503586	D1192586	8.6	200	250	• 660
YG-0503587	D1192587	8.7	200	250	• 660
YG-0503588	D1192588	8.8	200	250	• 710

รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-0503589	D1192589	8.9	200	250	• 710
YG-0503590	D1192590	9.0	200	250	710
YG-0503591	D1192591	9.1	200	250	• 710
YG-0503592	D1192592	9.2	200	250	• 730
YG-0503593	D1192593	9.3	200	250	• 730
YG-0503594	D1192594	9.4	200	250	• 730
YG-0503595	D1192595	9.5	200	250	730
YG-0503596	D1192596	9.6	200	250	• 790
YG-0503597	D1192597	9.7	200	250	• 790
YG-0503598	D1192598	9.8	200	250	• 790
YG-0503599	D1192599	9.9	200	250	• 790
YG-0503800	D1192800	10.0	200	250	890
YG-0503801	D1192801	10.1	200	250	• 890
YG-0503802	D1192802	10.2	200	250	• 890
YG-0503803	D1192803	10.3	200	250	• 890
YG-0503804	D1192804	10.4	200	250	• 970
YG-0503805	D1192805	10.5	200	250	970
YG-0503806	D1192806	10.6	200	250	• 970
YG-0503807	D1192807	10.7	200	250	• 970
YG-0503808	D1192808	10.8	200	250	• 1,040
YG-0503809	D1192809	10.9	200	250	• 1,040
YG-0503810	D1192810	11.0	200	250	1,040
YG-0503811	D1192811	11.1	200	250	• 1,040
YG-0503812	D1192812	11.2	200	250	• 1,070
YG-0503813	D1192813	11.3	200	250	• 1,070
YG-0503814	D1192814	11.4	200	250	• 1,070
YG-0503815	D1192815	11.5	200	250	1,070
YG-0503816	D1192816	11.6	200	250	• 1,100
YG-0503817	D1192817	11.7	200	250	• 1,100
YG-0503818	D1192818	11.8	200	250	• 1,100
YG-0503819	D1192819	11.9	200	250	• 1,100
YG-0503820	D1192820	12.0	200	250	1,170
YG-0503821	D1192821	12.1	200	250	• 1,170
YG-0503822	D1192822	12.2	200	250	• 1,170
YG-0503823	D1192823	12.3	200	250	• 1,170
YG-0503824	D1192824	12.4	200	250	• 1,200
YG-0503825	D1192825	12.5	200	250	1,200
YG-0503826	D1192826	12.6	200	250	• 1,200
YG-0503827	D1192827	12.7	200	250	• 1,270
YG-0503828	D1192828	12.8	200	250	• 1,270
YG-0503829	D1192829	12.9	200	250	• 1,270
YG-0503830	D1192830	13.0	200	250	1,270

• Order

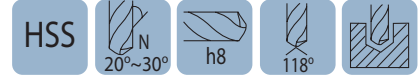
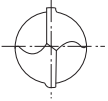
YG ดอกสว่าน HSS ยาว 300 MM



SERIES D1192

Application : Designed for drilling deep holes or deeply located holes. Drills in steel, cast steel alloyed and non-alloyed, grey cast iron, malleable cast iron graphite.

การใช้งาน : ใช้สำหรับเจาะรูลึก เหมาะสำหรับเจาะเหล็ก, cast steel alloyed และ non-alloyed, grey cast iron, รวมทั้ง malleable cast iron graphite



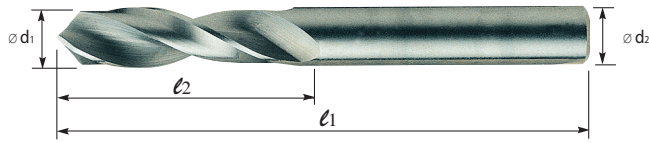
Unit : mm

รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท
YG-0504654	D1192654	5.4	200	300	• 460
YG-0504655	D1192655	5.5	200	300	460
YG-0504656	D1192656	5.6	200	300	• 480
YG-0504660	D1192660	6.0	200	300	510
YG-0504662	D1192662	6.2	200	300	• 510
YG-0504664	D1192664	6.4	200	300	• 570
YG-0504665	D1192665	6.5	200	300	570
YG-0504666	D1192666	6.6	200	300	• 570
YG-0504670	D1192670	7.0	200	300	620
YG-0504672	D1192672	7.2	200	300	• 670
YG-0504674	D1192674	7.4	200	300	• 670
YG-0504675	D1192675	7.5	200	300	670
YG-0504676	D1192676	7.6	200	300	• 690
YG-0504678	D1192678	7.8	200	300	• 690
YG-0504680	D1192680	8.0	200	300	750
YG-0504682	D1192682	8.2	200	300	• 750
YG-0504684	D1192684	8.4	200	300	• 790
YG-0504685	D1192685	8.5	200	300	790
YG-0504686	D1192686	8.6	200	300	• 790
YG-0504688	D1192688	8.8	200	300	• 840
YG-0504690	D1192690	9.0	200	300	840
YG-0504692	D1192692	9.2	200	300	• 870
YG-0504694	D1192694	9.4	200	300	• 870
YG-0504695	D1192695	9.5	200	300	870
YG-0504696	D1192696	9.6	200	300	• 950
YG-0504698	D1192698	9.8	200	300	• 950
YG-0504900	D1192900	10.0	200	300	1,080
YG-0504901	D1192901	10.1	200	300	• 1,080
YG-0504902	D1192902	10.2	200	300	• 1,080
YG-0504903	D1192903	10.3	200	300	• 1,080

รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท
YG-0504904	D1192904	10.4	200	300	• 1,170
YG-0504905	D1192905	10.5	200	300	1,170
YG-0504906	D1192906	10.6	200	300	• 1,170
YG-0504907	D1192907	10.7	200	300	• 1,170
YG-0504908	D1192908	10.8	200	300	• 1,240
YG-0504909	D1192909	10.9	200	300	• 1,240
YG-0504910	D1192910	11.0	200	300	1,240
YG-0504911	D1192911	11.1	200	300	• 1,240
YG-0504912	D1192912	11.2	200	300	• 1,290
YG-0504913	D1192913	11.3	200	300	• 1,290
YG-0504914	D1192914	11.4	200	300	• 1,290
YG-0504915	D1192915	11.5	200	300	1,290
YG-0504916	D1192916	11.6	200	300	• 1,310
YG-0504917	D1192917	11.7	200	300	• 1,310
YG-0504918	D1192918	11.8	200	300	• 1,310
YG-0504919	D1192919	11.9	200	300	• 1,310
YG-0504920	D1192920	12.0	200	300	1,400
YG-0504921	D1192921	12.1	200	300	• 1,400
YG-0504922	D1192922	12.2	200	300	• 1,400
YG-0504923	D1192923	12.3	200	300	• 1,400
YG-0504924	D1192924	12.4	200	300	• 1,450
YG-0504925	D1192925	12.5	200	300	1,450
YG-0504926	D1192926	12.6	200	300	• 1,450
YG-0504927	D1192927	12.7	200	300	• 1,520
YG-0504928	D1192928	12.8	200	300	• 1,520
YG-0504929	D1192929	12.9	200	300	• 1,520
YG-0504930	D1192930	13.0	200	300	1,520
YG-0504A20	D1192A20	12.0	250	350	• 1,720
YG-0504A30	D1192A30	13.0	250	350	• 1,860

• Order

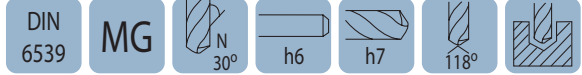
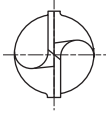
YG ดอกสว่านคาร์ไบด์ STUB LENGTH



$$d_1 = d_2$$

SERIES D5405

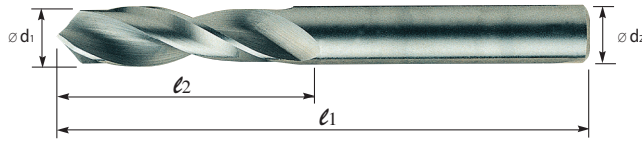
Application : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



Unit : mm

รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท	รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท
YG-1001020	D5405020	2.0	12	38	300	YG-1001047	D5405047	4.7	24	58	690
YG-1001021	D5405021	2.1	12	38	330	YG-1001048	D5405048	4.8	26	62	690
YG-1001022	D5405022	2.2	13	40	330	YG-1001049	D5405049	4.9	26	62	690
YG-1001023	D5405023	2.3	13	40	330	YG-1001050	D5405050	5.0	26	62	690
YG-1001024	D5405024	2.4	14	43	330	YG-1001051	D5405051	5.1	26	62	690
YG-1001025	D5405025	2.5	14	43	330	YG-1001052	D5405052	5.2	26	62	900
YG-1001026	D5405026	2.6	14	43	330	YG-1001053	D5405053	5.3	26	62	900
YG-1001027	D5405027	2.7	16	46	440	YG-1001054	D5405054	5.4	28	66	900
YG-1001028	D5405028	2.8	16	46	440	YG-1001055	D5405055	5.5	28	66	900
YG-1001029	D5405029	2.9	16	46	440	YG-1001056	D5405056	5.6	28	66	950
YG-1001030	D5405030	3.0	16	46	440	YG-1001057	D5405057	5.7	28	66	950
YG-1001031	D5405031	3.1	18	49	450	YG-1001058	D5405058	5.8	28	66	950
YG-1001032	D5405032	3.2	18	49	450	YG-1001058	D5405059	5.9	28	66	950
YG-1001033	D5405033	3.3	18	49	450	YG-1001060	D5405060	6.0	28	66	950
YG-1001034	D5405034	3.4	20	52	480	YG-1001061	D5405061	6.1	31	70	1,200
YG-1001035	D5405035	3.5	20	52	480	YG-1001062	D5405062	6.2	31	70	1,200
YG-1001036	D5405036	3.6	20	52	530	YG-1001063	D5405063	6.3	31	70	1,200
YG-1001037	D5405037	3.7	20	52	530	YG-1001064	D5405064	6.4	31	70	1,200
YG-1001038	D5405038	3.8	20	52	580	YG-1001065	D5405065	6.5	31	70	1,200
YG-1001039	D5405039	3.9	22	55	580	YG-1001066	D5405066	6.6	31	70	1,410
YG-1001040	D5405040	4.0	22	55	580	YG-1001067	D5405067	6.7	31	70	1,410
YG-1001041	D5405041	4.1	22	55	610	YG-1001068	D5405068	6.8	34	74	1,410
YG-1001042	D5405042	4.2	22	55	610	YG-1001069	D5405069	6.9	34	74	1,410
YG-1001043	D5405043	4.3	24	58	640	YG-1001070	D5405070	7.0	34	74	1,410
YG-1001044	D5405044	4.4	24	58	640	YG-1001071	D5405071	7.1	34	74	1,680
YG-1001045	D5405045	4.5	24	58	640	YG-1001072	D5405072	7.2	34	74	1,680
YG-1001046	D5405046	4.6	24	58	640	YG-1001073	D5405073	7.3	34	74	1,680

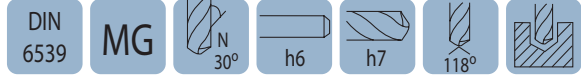
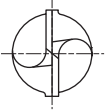
YG ดอกสว่านคาร์ไบด์ STUB LENGTH



$d_1=d_2$

SERIES D5405

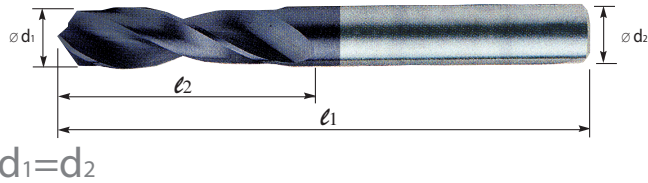
Application : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



Unit : mm

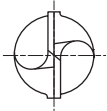
รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท	รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท
YG-1001074	D5405074	7.4	34	74	1,680	YG-1001091	D5405091	9.1	40	84	2,760
YG-1001075	D5405075	7.5	34	74	1,680	YG-1001092	D5405092	9.2	40	84	2,760
YG-1001076	D5405076	7.6	37	79	1,900	YG-1001093	D5405093	9.3	40	84	2,760
YG-1001077	D5405077	7.7	37	79	1,900	YG-1001094	D5405094	9.4	40	84	2,760
YG-1001078	D5405078	7.8	37	79	1,900	YG-1001095	D5405095	9.5	40	84	2,760
YG-1001079	D5405079	7.9	37	79	1,900	YG-1001096	D5405096	9.6	43	89	2,760
YG-1001080	D5405080	8.0	37	79	1,900	YG-1001097	D5405097	9.7	43	89	2,850
YG-1001081	D5405081	8.1	37	79	2,320	YG-1001098	D5405098	9.8	43	89	2,850
YG-1001082	D5405082	8.2	37	79	2,320	YG-1001099	D5405099	9.9	43	89	2,850
YG-1001083	D5405083	8.3	37	79	2,320	YG-1001100	D5405100	10.0	43	89	2,850
YG-1001084	D5405084	8.4	37	79	2,320	YG-1001102	D5405102	10.2	43	89	3,220
YG-1001085	D5405085	8.5	37	79	2,360	YG-1001105	D5405105	10.5	43	89	3,220
YG-1001086	D5405086	8.6	40	84	2,520	YG-1001110	D5405110	11.0	47	95	3,580
YG-1001087	D5405087	8.7	40	84	2,520	YG-1001115	D5405115	11.5	47	95	4,200
YG-1001088	D5405088	8.8	40	84	2,520	YG-1001120	D5405120	12.0	51	102	4,200
YG-1001089	D5405089	8.9	40	84	2,520	YG-1001130	D5405130	13.0	51	102	5,100
YG-1001090	D5405090	9.0	40	84	2,520						

YG ดอกสว่านคาร์ไบด์ STUB LENGTH ชุบ TiAlN



SERIES DH405

Application : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



DIN 6539

MG

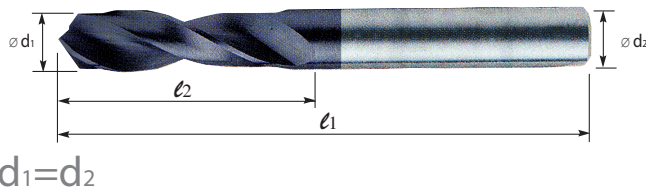
TiAlN



Unit : mm

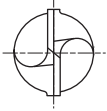
รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อื่น / บาท	รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อื่น / บาท
YG-1002020	DH405020	2.0	12	38	500	YG-1002047	DH405047	4.7	24	58	910
YG-1002021	DH405021	2.1	12	38	540	YG-1002048	DH405048	4.8	26	62	910
YG-1002022	DH405022	2.2	13	40	540	YG-1002049	DH405049	4.9	26	62	910
YG-1002023	DH405023	2.3	13	40	540	YG-1002050	DH405050	5.0	26	62	910
YG-1002024	DH405024	2.4	14	43	540	YG-1002051	DH405051	5.1	26	62	910
YG-1002025	DH405025	2.5	14	43	540	YG-1002052	DH405052	5.2	26	62	1,130
YG-1002026	DH405026	2.6	14	43	540	YG-1002053	DH405053	5.3	26	62	1,130
YG-1002027	DH405027	2.7	16	46	660	YG-1002054	DH405054	5.4	28	66	1,130
YG-1002028	DH405028	2.8	16	46	660	YG-1002055	DH405055	5.5	28	66	1,130
YG-1002029	DH405029	2.9	16	46	660	YG-1002056	DH405056	5.6	28	66	1,200
YG-1002030	DH405030	3.0	16	46	660	YG-1002057	DH405057	5.7	28	66	1,200
YG-1002031	DH405031	3.1	18	49	660	YG-1002058	DH405058	5.8	28	66	1,200
YG-1002032	DH405032	3.2	18	49	660	YG-1002059	DH405059	5.9	28	66	1,200
YG-1002033	DH405033	3.3	18	49	660	YG-1002060	DH405060	6.0	28	66	1,200
YG-1002034	DH405034	3.4	20	52	700	YG-1002061	DH405061	6.1	31	70	1,450
YG-1002035	DH405035	3.5	20	52	700	YG-1002062	DH405062	6.2	31	70	1,450
YG-1002036	DH405036	3.6	20	52	750	YG-1002063	DH405063	6.3	31	70	1,450
YG-1002037	DH405037	3.7	20	52	750	YG-1002064	DH405064	6.4	31	70	1,450
YG-1002038	DH405038	3.8	20	52	790	YG-1002065	DH405065	6.5	31	70	1,540
YG-1002039	DH405039	3.9	22	55	790	YG-1002066	DH405066	6.6	31	70	1,800
YG-1002040	DH405040	4.0	22	55	790	YG-1002067	DH405067	6.7	31	70	1,800
YG-1002041	DH405041	4.1	22	55	830	YG-1002068	DH405068	6.8	34	74	1,800
YG-1002042	DH405042	4.2	22	55	830	YG-1002069	DH405069	6.9	34	74	1,800
YG-1002043	DH405043	4.3	24	58	870	YG-1002070	DH405070	7.0	34	74	2,100
YG-1002044	DH405044	4.4	24	58	870	YG-1002071	DH405071	7.1	34	74	2,100
YG-1002045	DH405045	4.5	24	58	870	YG-1002072	DH405072	7.2	34	74	2,100
YG-1002046	DH405046	4.6	24	58	870	YG-1002073	DH405073	7.3	34	74	2,100

YG ดอกสว่านคาร์ไบด์ STUB LENGTH ชุบ TiAlN



SERIES DH405

Application : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



DIN
6539

MG

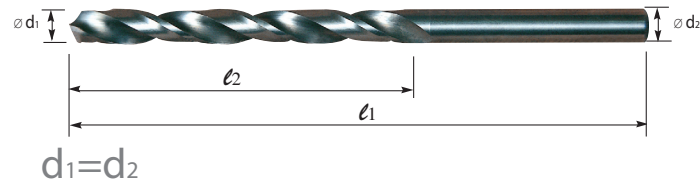
TiAlN



Unit: mm

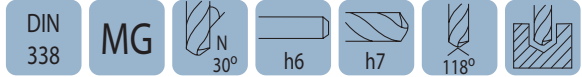
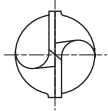
รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท	รหัสสินค้า	EDP No.	Drill Diameter d1	l2	l1	อัน / บาท
YG-1002074	DH405074	7.4	34	74	2,100	YG-1002091	DH405091	9.1	40	84	3,250
YG-1002075	DH405075	7.5	34	74	2,100	YG-1002092	DH405092	9.2	40	84	3,250
YG-1002076	DH405076	7.6	37	79	2,320	YG-1002093	DH405093	9.3	40	84	3,250
YG-1002077	DH405077	7.7	37	79	2,320	YG-1002094	DH405094	9.4	40	84	3,250
YG-1002078	DH405078	7.8	37	79	2,320	YG-1002095	DH405095	9.5	40	84	3,250
YG-1002079	DH405079	7.9	37	79	2,320	YG-1002096	DH405096	9.6	43	89	3,350
YG-1002080	DH405080	8.0	37	79	2,320	YG-1002097	DH405097	9.7	43	89	3,350
YG-1002081	DH405081	8.1	37	79	2,760	YG-1002098	DH405098	9.8	43	89	3,350
YG-1002082	DH405082	8.2	37	79	2,760	YG-1002099	DH405099	9.9	43	89	3,350
YG-1002083	DH405083	8.3	37	79	2,760	YG-1002100	DH405100	10.0	43	89	3,350
YG-1002084	DH405084	8.4	37	79	2,760	YG-1002102	DH405102	10.2	43	89	3,730
YG-1002085	DH405085	8.5	37	79	2,830	YG-1002105	DH405105	10.5	43	89	3,770
YG-1002086	DH405086	8.6	40	84	3,000	YG-1002110	DH405110	11.0	47	95	4,150
YG-1002087	DH405087	8.7	40	84	3,000	YG-1002115	DH405115	11.5	47	95	4,780
YG-1002088	DH405088	8.8	40	84	3,000	YG-1002120	DH405120	12.0	51	102	4,780
YG-1002089	DH405089	8.9	40	84	3,000	YG-1002130	DH405130	13.0	51	102	5,720
YG-1002090	DH405090	9.0	40	84	3,000						

YG ดอกสว่านคาร์ไบด์ JOBBER LENGTH



SERIES D5407

Application : Drilling into steel in general, cast steel, cast iron, chilled cast iron, malleable cast iron, non-ferrous heavy metal, non-ferrous light metal, abrasive plastic.



Unit: mm



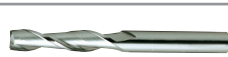









รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท	รหัสสินค้า	EDP No.	Drill Diameter d1	l ₂	l ₁	อัน / บาท
YG-1101020	D5407020	2.0	24	49	410	YG-1101050	D5407050	5.0	52	86	1,110
YG-1101021	D5407021	2.1	24	49	480	YG-1101051	D5407051	5.1	52	86	1,350
YG-1101022	D5407022	2.2	27	53	520	YG-1101052	D5407052	5.2	52	86	1,350
YG-1101023	D5407023	2.3	27	53	520	YG-1101053	D5407053	5.3	52	86	1,350
YG-1101024	D5407024	2.4	30	57	520	YG-1101054	D5407054	5.4	57	93	1,530
YG-1101025	D5407025	2.5	30	57	510	YG-1101055	D5407055	5.5	57	93	1,470
YG-1101026	D5407026	2.6	30	57	680	YG-1101056	D5407056	5.6	57	93	1,610
YG-1101027	D5407027	2.7	33	61	680	YG-1101057	D5407057	5.7	57	93	1,610
YG-1101028	D5407028	2.8	33	61	680	YG-1101058	D5407058	5.8	57	93	1,610
YG-1101029	D5407029	2.9	33	61	680	YG-1101059	D5407059	5.9	57	93	1,610
YG-1101030	D5407030	3.0	33	61	660	YG-1101060	D5407060	6.0	57	93	1,560
YG-1101031	D5407031	3.1	36	65	660	YG-1101061	D5407061	6.1	63	101	1,990
YG-1101032	D5407032	3.2	36	65	660	YG-1101062	D5407062	6.2	63	101	1,990
YG-1101033	D5407033	3.3	36	65	670	YG-1101063	D5407063	6.3	63	101	1,990
YG-1101034	D5407034	3.4	39	70	740	YG-1101064	D5407064	6.4	63	101	1,990
YG-1101035	D5407035	3.5	39	70	730	YG-1101065	D5407065	6.5	63	101	1,930
YG-1101036	D5407036	3.6	39	70	780	YG-1101068	D5407068	6.8	69	109	2,340
YG-1101037	D5407037	3.7	39	70	780	YG-1101070	D5407070	7.0	69	109	2,320
YG-1101038	D5407038	3.8	43	75	830	YG-1101080	D5407080	8.0	75	117	2,750
YG-1101039	D5407039	3.9	43	75	830	YG-1101085	D5407085	8.5	75	117	3,210
YG-1101040	D5407040	4.0	43	75	820	YG-1101090	D5407090	9.0	81	125	3,400
YG-1101041	D5407041	4.1	43	75	850	YG-1101095	D5407095	9.5	81	125	3,800
YG-1101042	D5407042	4.2	43	75	850	YG-1101100	D5407100	10.0	87	133	4,040
YG-1101043	D5407043	4.3	47	80	1,120	YG-1101102	D5407102	10.2	87	133	4,890
YG-1101044	D5407044	4.4	47	80	1,120	YG-1101105	D5407105	10.5	87	133	5,100
YG-1101045	D5407045	4.5	47	80	1,020	YG-1101110	D5407110	11.0	94	142	6,000
YG-1101046	D5407046	4.6	47	80	1,160	YG-1101115	D5407115	11.5	94	142	6,500
YG-1101047	D5407047	4.7	47	80	1,160	YG-1101120	D5407120	12.0	101	151	7,000
YG-1101048	D5407048	4.8	52	86	1,200	YG-1101125	D5407125	12.5	101	151	8,500
YG-1101049	D5407049	4.9	52	86	1,200	YG-1101130	D5407130	13.0	101	151	8,500











HSS END MILLS



HSS END MILLS

SELECTION GUIDE

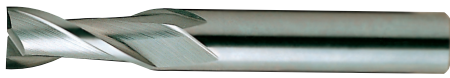
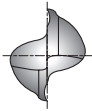
	E2401	ดอกเอ็นมิล HSS Co8 2 ฟัน COBALT 8% HSS, 2 FLUTE REGULAR LENGTH END MILLS	P. 39
	E7401	ดอกเอ็นมิล HSS Co8 2 ฟัน ชุบ TiCN COBALT 8% HSS, 2 FLUTE REGULAR LENGTH END MILLS, TiCN	P. 40
	E2406	ดอกเอ็นมิล HSS Co8 2 ฟัน ยาว COBALT 8% HSS, 2 FLUTE LONG LENGTH END MILLS	P. 41
	E7406	ดอกเอ็นมิล HSS Co8 2 ฟัน ยาว ชุบ TiCN COBALT 8% HSS, 2 FLUTE LONG LENGTH END MILL, TiCN	P. 42
	E2402	ดอกเอ็นมิล HSS Co8 4 ฟัน COBALT 8% HSS, 4&6 FLUTE REGULAR LENGTH END MILLS	P. 43
	E2412	ดอกเอ็นมิล HSS Co8 4 ฟัน Center Cut COBALT 8% HSS, 4&6 FLUTE REGULAR LENGTH, CENTER CUT END MILLS	P. 43
	E7402	ดอกเอ็นมิล HSS Co8 4 ฟัน ชุบ TiCN COBALT 8% HSS, 4&6 FLUTE REGULAR LENGTH END MILLS, TiCN	P. 44
	E7412	ดอกเอ็นมิล HSS Co8 4 ฟัน Center Cut ชุบ TiCN COBALT 8% HSS, 4&6 FLUTE REGULAR LENGTH CENTER CUT END MILLS, TiCN	P. 44
	E2659	ดอกเอ็นมิล HSS Co8 4 ฟัน ยาว COBALT 8% HSS, 4&6 FLUTE LONG LENGTH END MILLS	P. 45
	E7659	ดอกเอ็นมิล HSS Co8 4 ฟัน ยาว ชุบ TiCN COBALT 8% HSS, 4&6 FLUTE LONG LENGTH END MILLS, TiCN	P. 46
	E2750	ดอกเอ็นมิล HSS Co8 4 ฟัน ยาวพิเศษ COBALT 8% HSS, 4 FLUTE EXTRA LONG LENGTH END MILLS	P. 47
	E2480	ดอกเอ็นมิล HSS Co8 2 ฟัน หัวบอล COBALT 8% HSS, 2 FLUTE BALL NOSE REGULAR LENGTH END MILLS	P. 48

	E7480	ดอกเอ็นมิล HSS Co8 2 ฟัน หัวบอล ชุบ TiCN COBALT 8% HSS, 2 FLUTE BALL NOSE REGULAR LENGTH END MILLS, TiCN	P. 49
	E2752 E2759	ดอกเอ็นมิล HSS Co8 กัดหยาบ ยาว COBALT 8% HSS, LONG LENGTH ROUGHING END MILLS	P. 50
	E7752 E7759	ดอกเอ็นมิล HSS Co8 กัดหยาบ ยาว ชุบ TiCN COBALT 8% HSS, LONG LENGTH ROUGHING END MILLS, TiCN	P. 51
	E2760	ดอกเอ็นมิล HSS Co8 กัดหยาบ Center Cut COBALT 8% HSS, MULTI FLUTE SHORT LENGTH CENTER CUT ROUGHING E/M-COARSE	P. 52
	E7760	ดอกเอ็นมิล HSS Co8 กัดหยาบ Center Cut ชุบ TiCN HSS CO 8%, MULTI FL. SHORT LENGTH CENTER CUT ROUGHING E/M-COARSE, TiCN	P. 53
	E2753	ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด สั้น COBALT 8% HSS, MULTI FL. SHORT LENGTH ROUGHING END MILLS-FINE	P. 54
	E7753	ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด สั้น ชุบ TiCN HSS CO 8%, MULTI FL. SHORT LENGTH ROUGHING END MILLS-FINE, TiCN	P. 55
	E2762	ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด ยาว COBALT 8% HSS, MULTI FL. LONG LENGTH ROUGHING END MILLS-FINE	P. 56
	E7762	ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด ยาว ชุบ TiCN COBALT 8% HSS, MULTI FL. LONG LENGTH ROUGHING END MILLS-FINE, TiCN	P. 57
	E2498	เอ็นมิลคัตเตอร์ HSS Co8 มุม R COBALT 8% HSS, 4 FLUTE CORNER ROUNDING CUTTERS	P. 58
SPEED & FEED DATA			P. 59

HSS Co8 Material Selection

	Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
				~40 HRc	~50 HRc	~60 HRc	60 HRc~						
Uncoated	○	○	○	○				○	○	○	○	○	
TiCN	◎	◎	◎	○				◎	◎	◎	◎	◎	

YG ดอกเอ็นมิล HSS Co8 2 ฟัน



SERIES E2401
PLAIN SHANK

These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. These are designed for slotting, drilling, pocketing and general-purpose operation.

Cutting Data ดูหน้า 59

HSS
Co8

FLUTE
2

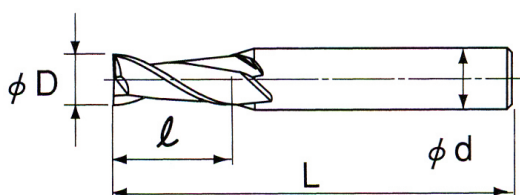


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2001010	E2401010	1.0	6	2.5	55	460
YG-2001015	E2401015	1.5	6	4	55	430
YG-2001020	E2401020	2.0	6	6	55	340
YG-2001025	E2401025	2.5	6	7	55	340
YG-2001030	E2401030	3.0	6	10	55	340
YG-2001035	E2401035	3.5	8	12	60	380
YG-2001903	E2401903	* 4.0	6	12	55	340
YG-2001040	E2401040	4.0	8	12	60	380
YG-2001045	E2401045	4.5	8	15	65	380
YG-2001905	E2401905	* 5.0	6	15	60	340
YG-2001050	E2401050	5.0	8	15	65	380
YG-2001055	E2401055	5.5	8	15	65	380
YG-2001907	E2401907	* 6.0	6	15	60	340
YG-2001060	E2401060	6.0	8	15	65	380
YG-2001065	E2401065	6.5	10	20	75	430
YG-2001909	E2401909	* 7.0	8	20	70	380
YG-2001070	E2401070	7.0	10	20	75	430
YG-2001075	E2401075	7.5	10	20	75	430
YG-2001911	E2401911	* 8.0	8	20	70	380
YG-2001080	E2401080	8.0	10	21	75	430
YG-2001085	E2401085	8.5	10	25	80	460
YG-2001090	E2401090	9.0	10	25	80	460
YG-2001095	E2401095	9.5	10	25	80	460
YG-2001100	E2401100	10.0	10	26	80	460
YG-2001105	E2401105	10.5	12	30	90	650
YG-2001110	E2401110	11.0	12	30	90	650
YG-2001115	E2401115	11.5	12	30	90	650
YG-2001120	E2401120	12.0	12	31	90	650
YG-2001130	E2401130	13.0	12	35	95	910
YG-2001916	E2401916	* 14.0	12	35	95	990
YG-2001140	E2401140	14.0	16	35	100	990

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2001150	E2401150	15.0	16	40	105	990
YG-2001160	E2401160	16.0	16	40	105	990
YG-2001170	E2401170	17.0	16	40	105	1,160
YG-2001180	E2401180	18.0	16	40	105	1,160
YG-2001190	E2401190	19.0	20	45	115	1,390
YG-2001200	E2401200	20.0	20	45	115	1,390
YG-2001210	E2401210	21.0	20	45	115	1,550
YG-2001220	E2401220	22.0	20	45	115	1,550
YG-2001230	E2401230	23.0	25	50	125	2,300
YG-2001240	E2401240	24.0	25	50	125	2,300
YG-2001250	E2401250	25.0	25	50	125	2,300
YG-2001260	E2401260	26.0	25	50	125	2,500
YG-2001270	E2401270	27.0	25	55	125	2,700
YG-2001280	E2401280	28.0	25	55	125	2,900
YG-2001290	E2401290	29.0	25	55	125	3,300
YG-2001300	E2401300	30.0	25	55	125	3,300
YG-2001310	E2401310	31.0	32	60	145	4,300
YG-2001320	E2401320	32.0	32	60	145	4,300
YG-2001330	E2401330	33.0	32	60	145	•6,000
YG-2001340	E2401340	34.0	32	60	145	•6,000
YG-2001350	E2401350	35.0	32	60	145	•6,500
YG-2001360	E2401360	36.0	32	65	150	•7,000
YG-2001370	E2401370	37.0	32	65	150	•7,500
YG-2001380	E2401380	38.0	32	65	150	•7,500
YG-2001390	E2401390	39.0	32	65	150	•8,000
YG-2001400	E2401400	40.0	32	65	150	•8,000
YG-2001420	E2401420	42.0	42	70	160	•10,500
YG-2001450	E2401450	45.0	42	70	160	•12,000
YG-2001460	E2401460	46.0	42	75	160	•12,500
YG-2001480	E2401480	48.0	42	75	165	•14,000
YG-2001500	E2401500	50.0	42	75	165	•15,500

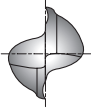
• Order



Unit : mm

	MILL DIAMETER				
	•6	•8	•10	•12	OTHER SIZE
TOLERANCE	0 -0.035	0 -0.040	0 -0.040	0 -0.045	0 -0.030

YG ดอกเอ็นมิล HSS Co8 2 ฟัน ชุบ TiCN



SERIES E7401
PLAIN SHANK

These end mills are furnished as regular with right-hand cutting and right-hand helical flutes. These are designed for slotting, drilling, pocketing and general-purpose operation.

Cutting Data ดูหน้า 59

HSS
Co8

FLUTE
2

TiCN



Unit : mm

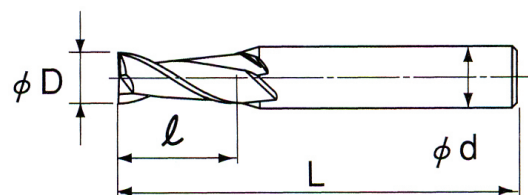
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2002010	E7401010	1.0	6	2.5	55	620
YG-2002015	E7401015	1.5	6	4	55	590
YG-2002020	E7401020	2.0	6	6	55	510
YG-2002025	E7401025	2.5	6	7	55	510
YG-2002030	E7401030	3.0	6	10	55	510
YG-2002035	E7401035	3.5	8	12	60	590
YG-2002903	E7401903	*4.0	6	12	55	510
YG-2002040	E7401040	4.0	8	12	60	590
YG-2002045	E7401045	4.5	8	15	65	590
YG-2002905	E7401905	*5.0	6	15	60	520
YG-2002050	E7401050	5.0	8	15	65	590
YG-2002055	E7401055	5.5	8	15	65	590
YG-2002907	E7401907	*6.0	6	15	60	520
YG-2002060	E7401060	6.0	8	15	65	590
YG-2002065	E7401065	6.5	10	20	75	670
YG-2002909	E7401909	*7.0	8	20	70	590
YG-2002070	E7401070	7.0	10	20	75	670
YG-2002075	E7401075	7.5	10	20	75	670
YG-2002911	E7401911	*8.0	8	20	70	590
YG-2002080	E7401080	8.0	10	21	75	670
YG-2002085	E7401085	8.5	10	25	80	750
YG-2002090	E7401090	9.0	10	25	80	750
YG-2002095	E7401095	9.5	10	25	80	750
YG-2002100	E7401100	10.0	10	26	80	750
YG-2002105	E7401105	10.5	12	30	90	1,020
YG-2002110	E7401110	11.0	12	30	90	1,020
YG-2002115	E7401115	11.5	12	30	90	1,020
YG-2002120	E7401120	12.0	12	31	90	1,020
YG-2002130	E7401130	13.0	12	35	95	1,300
YG-2002916	E7401916	*14.0	12	35	95	1,430
YG-2002140	E7401140	14.0	16	35	100	1,530

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2002150	E7401150	15.0	16	40	105	1,530
YG-2002160	E7401160	16.0	16	40	105	1,530
YG-2002170	E7401170	17.0	16	40	105	1,750
YG-2002180	E7401180	18.0	16	40	105	1,790
YG-2002190	E7401190	19.0	20	45	115	2,140
YG-2002200	E7401200	20.0	20	45	115	2,140
YG-2002210	E7401210	21.0	20	45	115	2,340
YG-2002220	E7401220	22.0	20	45	115	2,420
YG-2002230	E7401230	23.0	25	50	125	3,400
YG-2002240	E7401240	24.0	25	50	125	3,400
YG-2002250	E7401250	25.0	25	50	125	3,400
YG-2002260	E7401260	26.0	25	50	125	3,700
YG-2002270	E7401270	27.0	25	55	125	3,900
YG-2002280	E7401280	28.0	25	55	125	4,200
YG-2002290	E7401290	29.0	25	55	125	4,800
YG-2002300	E7401300	30.0	25	55	125	4,900
YG-2002310	E7401310	31.0	32	60	145	6,100
YG-2002320	E7401320	32.0	32	60	145	6,100
YG-2002330	E7401330	33.0	32	60	145	8,500
YG-2002340	E7401340	34.0	32	60	145	9,000
YG-2002350	E7401350	35.0	32	60	145	9,500
YG-2002360	E7401360	36.0	32	65	150	10,000
YG-2002370	E7401370	37.0	32	65	150	10,750
YG-2002380	E7401380	38.0	32	65	150	11,000
YG-2002390	E7401390	39.0	32	65	150	12,000
YG-2002400	E7401400	40.0	32	65	150	12,500
YG-2002420	E7401420	42.0	42	70	160	15,500
YG-2002450	E7401450	45.0	42	70	160	17,500
YG-2002460	E7401460	46.0	42	75	160	18,500
YG-2002480	E7401480	48.0	42	75	165	20,500
YG-2002500	E7401500	50.0	42	75	165	22,000

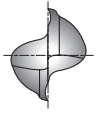
• Order

Unit : mm

	MILL DIAMETER
	from 1.1 to 5.9
TOLERANCE	0 -0.030



YG ดอกเอ็นมิล HSS Co8 2 ฟัน ยาว



SERIES E2406
PLAIN SHANK

Possible for deeper & wider cutting by using the much longer flutes.

Cutting Data ดูหน้า 59

HSS
Co8

FLUTE
2

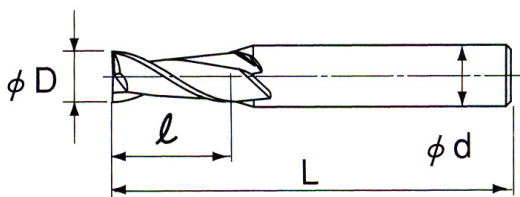


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2003030	E2406030	3.0	6	15	60	440
YG-2003901	E2406901	4.0	6	20	65	440
YG-2003902	E2406902	*5.0	6	25	70	440
YG-2003050	E2406050	5.0	8	25	75	490
YG-2003903	E2406903	*6.0	6	25	70	440
YG-2003060	E2406060	6.0	8	25	75	490
YG-2003070	E2406070	7.0	10	35	90	550
YG-2003080	E2406080	8.0	10	35	90	550
YG-2003090	E2406090	9.0	10	45	100	600
YG-2003100	E2406100	10.0	10	45	100	600
YG-2003110	E2406110	11.0	12	55	115	870
YG-2003120	E2406120	12.0	12	55	115	875
YG-2003130	E2406130	13.0	12	55	115	1,230
YG-2003140	E2406140	14.0	16	55	120	1,330
YG-2003150	E2406150	15.0	16	65	130	1,330
YG-2003160	E2406160	16.0	16	65	130	1,330
YG-2003170	E2406170	17.0	16	65	130	1,570
YG-2003180	E2406180	18.0	16	65	130	1,570
YG-2003190	E2406190	19.0	20	75	145	1,870
YG-2003200	E2406200	20.0	20	75	145	1,870
YG-2003210	E2406210	21.0	20	75	145	2,170
YG-2003220	E2406220	22.0	20	75	145	2,170

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2003230	E2406230	23.0	25	90	165	3,200
YG-2003240	E2406240	24.0	25	90	165	3,200
YG-2003250	E2406250	25.0	25	90	165	3,200
YG-2003260	E2406260	26.0	25	90	165	3,500
YG-2003270	E2406270	27.0	25	90	165	3,700
YG-2003280	E2406280	28.0	25	90	165	4,000
YG-2003290	E2406290	29.0	25	90	165	4,700
YG-2003300	E2406300	30.0	25	90	165	4,700
YG-2003310	E2406310	31.0	32	95	180	6,000
YG-2003320	E2406320	32.0	32	95	180	6,000
YG-2003330	E2406330	33.0	32	100	185	8,500
YG-2003340	E2406340	34.0	32	100	185	8,500
YG-2003350	E2406350	35.0	32	100	185	9,500
YG-2003360	E2406360	36.0	32	105	190	10,000
YG-2003370	E2406370	37.0	32	105	190	10,500
YG-2003380	E2406380	38.0	32	105	190	10,500
YG-2003390	E2406390	39.0	32	110	195	11,000
YG-2003400	E2406400	40.0	32	110	195	11,000
YG-2003420	E2406420	42.0	42	115	200	14,500
YG-2003450	E2406450	45.0	42	120	205	16,500
YG-2003480	E2406480	48.0	42	125	215	19,500
YG-2003500	E2406500	50.0	42	125	215	21,500

• Order

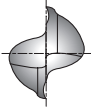


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	0 -30					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 2 ฟัน ยาว ชูบ TiCN



SERIES E7406
PLAIN SHANK

Possible for deeper & wider cutting by using the much longer flutes.

Cutting Data ดูหน้า 59

HSS
Co8

FLUTE
2

TiCN



Unit : mm

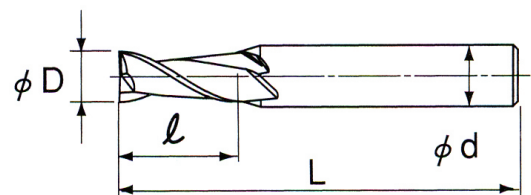
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2004030	E7406030	3.0	6	15	60	620
YG-2004901	E7406901	4.0	6	20	65	620
YG-2004902	E7406902	*5.0	6	25	70	620
YG-2004050	E7406050	5.0	8	25	75	730
YG-2004903	E7406903	*6.0	6	25	70	620
YG-2004060	E7406060	6.0	8	25	75	730
YG-2004070	E7406070	7.0	10	35	90	870
YG-2004080	E7406080	8.0	10	35	90	870
YG-2004090	E7406090	9.0	10	45	100	940
YG-2004100	E7406100	10.0	10	45	100	940
YG-2004110	E7406110	11.0	12	55	115	1,320
YG-2004120	E7406120	12.0	12	55	115	1,320
YG-2004130	E7406130	13.0	12	55	115	1,700
YG-2004140	E7406140	14.0	16	55	120	1,940
YG-2004150	E7406150	15.0	16	65	130	1,980
YG-2004160	E7406160	16.0	16	65	130	1,980
YG-2004170	E7406170	17.0	16	65	130	2,270
YG-2004180	E7406180	18.0	16	65	130	2,340
YG-2004190	E7406190	19.0	20	75	145	2,270
YG-2004200	E7406200	20.0	20	75	145	2,270
YG-2004210	E7406210	21.0	20	75	145	3,120
YG-2004220	E7406220	22.0	20	75	145	3,220

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2004230	E7406230	23.0	25	90	165	4,500
YG-2004240	E7406240	24.0	25	90	165	4,500
YG-2004250	E7406250	25.0	25	90	165	4,500
YG-2004260	E7406260	26.0	25	90	165	4,900
YG-2004270	E7406270	27.0	25	90	165	5,300
YG-2004280	E7406280	28.0	25	90	165	5,600
YG-2004290	E7406290	29.0	25	90	165	6,400
YG-2004300	E7406300	30.0	25	90	165	6,500
YG-2004310	E7406310	31.0	32	95	180	8,100
YG-2004320	E7406320	32.0	32	95	180	8,100
YG-2004330	E7406330	33.0	32	100	185	11,500
YG-2004340	E7406340	34.0	32	100	185	12,000
YG-2004350	E7406350	35.0	32	100	185	12,500
YG-2004360	E7406360	36.0	32	105	190	13,500
YG-2004370	E7406370	37.0	32	105	190	14,500
YG-2004380	E7406380	38.0	32	105	190	15,000
YG-2004390	E7406390	39.0	32	110	195	16,500
YG-2004400	E7406400	40.0	32	110	195	17,500
YG-2004420	E7406420	42.0	42	115	200	21,000
YG-2004450	E7406450	45.0	42	120	205	24,000
YG-2004480	E7406480	48.0	42	125	215	28,000
YG-2004500	E7406500	50.0	42	125	215	30,000

• Order

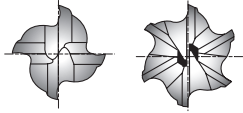
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	0 -30					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 4 ฟัน



SERIES E2402, E2412 & E2413
PLAIN SHANK

Possible for high speed cutting. Suitable for milling of high efficiency. Easy to regrind.

E2402 : เอ็นมิล HSS Co8 4 ฟัน
E2412 : เอ็นมิล HSS Co8 4 ฟัน Center Cut
E2413 : เอ็นมิล HSS Co8 6 ฟัน

Cutting Data ดูหน้า 60

HSS
Co8

FLUTE
4 & 6

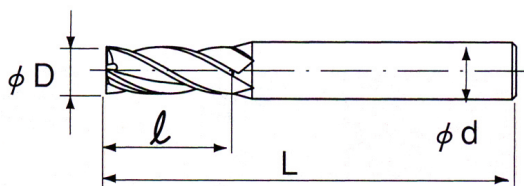


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2005015	E2402015	1.5	6	4	55	430
YG-2005020	E2402020	2.0	6	6	55	340
YG-2005025	E2402025	2.5	6	7	55	340
YG-2005030	E2412030	3.0	6	10	55	340
YG-2005035	E2412035	3.5	8	12	60	380
YG-2005902	E2412902	*4.0	6	12	55	340
YG-2005040	E2412040	4.0	8	12	60	380
YG-2005045	E2412045	4.5	8	15	65	380
YG-2005050	E2412050	5.0	8	15	65	380
YG-2005055	E2412055	5.5	8	15	65	380
YG-2005906	E2412906	*6.0	6	15	60	340
YG-2005060	E2412060	6.0	8	15	65	380
YG-2005070	E2412070	7.0	10	20	75	430
YG-2005910	E2412910	*8.0	8	20	70	380
YG-2005080	E2412080	8.0	10	20	75	430
YG-2005090	E2412090	9.0	10	25	80	460
YG-2005095	E2412095	9.5	10	25	80	460
YG-2005100	E2412100	10.0	10	25	80	460
YG-2005110	E2412110	11.0	12	30	90	650
YG-2005120	E2412120	12.0	12	30	90	650
YG-2005130	E2412130	13.0	12	35	95	910
YG-2005140	E2412140	14.0	16	35	100	990
YG-2005150	E2412150	15.0	16	40	105	990
YG-2005160	E2412160	16.0	16	40	105	990
YG-2005170	E2412170	17.0	16	40	105	1,160
YG-2005180	E2412180	18.0	16	40	105	1,160

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2005190	E2412190	19.0	20	45	115	1,390
YG-2005200	E2412200	20.0	20	45	115	1,390
YG-2005210	E2412210	21.0	20	45	115	1,550
YG-2005220	E2412220	22.0	20	45	115	1,550
YG-2005230	E2412230	23.0	25	50	125	2,300
YG-2005240	E2412240	24.0	25	50	125	2,300
YG-2005250	E2412250	25.0	25	50	125	2,300
YG-2005260	E2412260	26.0	25	50	125	2,500
YG-2005270	E2412270	27.0	25	55	125	2,700
YG-2005280	E2412280	28.0	25	55	125	2,900
YG-2005290	E2412290	29.0	25	55	125	3,300
YG-2005300	E2412300	30.0	25	55	125	3,300
YG-2005310	E2412310	31.0	32	60	145	4,300
YG-2005320	E2412320	32.0	32	60	145	4,300
YG-2005330	E2412330	33.0	32	60	145	• 6,000
YG-2005340	E2412340	34.0	32	60	145	• 6,000
YG-2005350	E2412350	35.0	32	60	145	• 6,500
YG-2005360	E2412360	36.0	32	65	150	• 7,000
YG-2005370	E2412370	37.0	32	65	150	• 7,500
YG-2005380	E2412380	38.0	32	65	150	• 7,500
YG-2005390	E2412390	39.0	32	65	150	• 8,000
YG-2005400	E2412400	40.0	32	65	150	• 8,000
• YG-2005420	E2413420	42.0	42	70	160	• 10,500
• YG-2005450	E2413450	45.0	42	70	160	• 12,000
• YG-2005480	E2413480	48.0	42	75	165	• 14,000
• YG-2005500	E2413500	50.0	42	75	165	• 15,500

• 6 ฟัน • Order

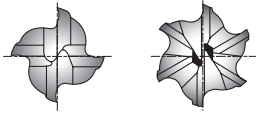


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	+ 30 0					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 4 ฟัน ชุบ TiCN



SERIES E7402, E7412 & E7413
PLAIN SHANK

Possible for high speed cutting. Suitable for milling of high efficiency. Easy to regrind.

- E7402 : เอ็นมิล HSS Co8 4 ฟัน ชุบ TiCN
- E7412 : เอ็นมิล HSS Co8 4 ฟัน Center Cut ชุบ TiCN
- E7413 : เอ็นมิล HSS Co8 6 ฟัน ชุบ TiCN

HSS Co8

FLUTE 4 & 6

TiCN



Cutting Data ตูหน้า 60

Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2006015	E7402015	1.5	6	4	55	590
YG-2006020	E7402020	2.0	6	6	55	510
YG-2006025	E7402025	2.5	6	7	55	510

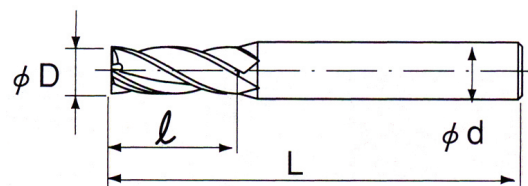
YG-2006030	E7412030	3.0	6	10	55	510
YG-2006035	E7412035	3.5	8	12	60	590
YG-2006902	E7412902	*4.0	6	12	55	510
YG-2006040	E7412040	4.0	8	12	60	590
YG-2006045	E7412045	4.5	8	15	65	590
YG-2006050	E7412050	5.0	8	15	65	590
YG-2006055	E7412055	5.5	8	15	65	590
YG-2006906	E7412906	*6.0	6	15	60	520
YG-2006060	E7412060	6.0	8	15	65	590
YG-2006070	E7412070	7.0	10	20	75	670
YG-2006910	E7412910	*8.0	8	20	70	590
YG-2006080	E7412080	8.0	10	20	75	670
YG-2006090	E7412090	9.0	10	25	80	750
YG-2006095	E7412095	9.5	10	25	80	750
YG-2006100	E7412100	10.0	10	25	80	750
YG-2006110	E7412110	11.0	12	30	90	1,020
YG-2006120	E7412120	12.0	12	30	90	1,020
YG-2006130	E7412130	13.0	12	35	95	1,300
YG-2006140	E7412140	14.0	16	35	100	1,530
YG-2006150	E7412150	15.0	16	40	105	1,530
YG-2006160	E7412160	16.0	16	40	105	1,530
YG-2006170	E7412170	17.0	16	40	105	1,750
YG-2006180	E7412180	18.0	16	40	105	1,790

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2006190	E7412190	19.0	20	45	115	2,140
YG-2006200	E7412200	20.0	20	45	115	2,140
YG-2006210	E7412210	21.0	20	45	115	2,340
YG-2006220	E7412220	22.0	20	45	115	2,420
YG-2006230	E7412230	23.0	25	50	125	3,400
YG-2006240	E7412240	24.0	25	50	125	3,400
YG-2006250	E7412250	25.0	25	50	125	3,400
YG-2006260	E7412260	26.0	25	50	125	3,700
YG-2006270	E7412270	27.0	25	55	125	3,900
YG-2006280	E7412280	28.0	25	55	125	4,200
YG-2006290	E7412290	29.0	25	55	125	4,800
YG-2006300	E7412300	30.0	25	55	125	4,900
YG-2006310	E7412310	31.0	32	60	145	6,100
YG-2006320	E7412320	32.0	32	60	145	6,100
YG-2006330	E7412330	33.0	32	60	145	• 8,500
YG-2006340	E7412340	34.0	32	60	145	• 9,000
YG-2006350	E7412350	35.0	32	60	145	• 9,500
YG-2006360	E7412360	36.0	32	65	150	• 10,000
YG-2006370	E7412370	37.0	32	65	150	• 10,750
YG-2006380	E7412380	38.0	32	65	150	• 11,000
YG-2006390	E7412390	39.0	32	65	150	• 12,000
YG-2006400	E7412400	40.0	32	65	150	• 12,500
• YG-2006420	E7413420	42.0	42	70	160	• 15,500
• YG-2006450	E7413450	45.0	42	70	160	• 18,000
• YG-2006480	E7413480	48.0	42	75	165	• 20,000
• YG-2006500	E7413500	50.0	42	75	165	• 22,000

• 6 ฟัน • Order

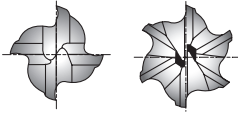
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	+ 30 0					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 4 ฟัน ยาว



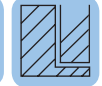
SERIES E2659
PLAIN SHANK

Much longer flute length than E2402 & 2403
(C4ORS & C6ORS)type allows deeper &
wider cutting.

Cutting Data ดูหน้า 60

HSS
Co8

FLUTE
4 & 6

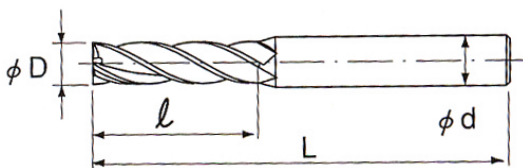


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อื่น / บาท
YG-2007030	E2659030	3.0	6	15	60	460
YG-2007040	E2659040	4.0	8	20	70	510
YG-2007050	E2659050	5.0	8	25	75	510
YG-2007060	E2659060	6.0	8	25	75	510
YG-2007070	E2659070	7.0	10	35	90	580
YG-2007080	E2659080	8.0	10	35	90	580
YG-2007090	E2659090	9.0	10	45	100	630
YG-2007100	E2659100	10.0	10	45	100	630
YG-2007110	E2659110	11.0	12	55	115	910
YG-2007120	E2659120	12.0	12	55	115	910
YG-2007130	E2659130	13.0	12	55	115	1,290
YG-2007140	E2659140	14.0	16	55	120	1,400
YG-2007150	E2659150	15.0	16	65	130	1,400
YG-2007160	E2659160	16.0	16	65	130	1,400
YG-2007170	E2659170	17.0	16	65	130	1,650
YG-2007180	E2659180	18.0	16	65	130	1,650
YG-2007190	E2659190	19.0	20	75	145	2,160
YG-2007200	E2659200	20.0	20	75	145	1,970
YG-2007210	E2659210	21.0	20	75	145	2,270

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อื่น / บาท
YG-2007220	E2659220	22.0	20	75	145	2,270
YG-2007230	E2659230	23.0	25	90	165	3,500
YG-2007240	E2659240	24.0	25	90	165	3,300
YG-2007250	E2659250	25.0	25	90	165	3,300
YG-2007260	E2659260	26.0	25	90	165	3,700
YG-2007270	E2659270	27.0	25	90	165	3,900
YG-2007280	E2659280	28.0	25	90	165	4,200
YG-2007290	E2659290	29.0	25	90	165	5,400
YG-2007300	E2659300	30.0	25	90	165	4,900
YG-2007320	E2659320	32.0	32	95	180	6,300
YG-2007340	E2659340	34.0	32	100	185	• 9,000
YG-2007350	E2659350	35.0	32	100	185	• 9,600
YG-2007360	E2659360	36.0	32	105	190	• 10,500
YG-2007380	E2659380	38.0	32	105	190	• 11,000
YG-2007400	E2659400	40.0	32	110	195	• 12,000
• YG-2007420	E2659420	42.0	42	115	200	• 15,000
• YG-2007450	E2659450	45.0	42	120	205	• 17,500
• YG-2007480	E2659480	48.0	42	125	215	• 20,500
• YG-2007500	E2659500	50.0	42	125	215	• 22,500

• 6 ฟัน • Order

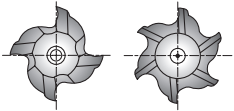


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	+ 30 0					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 4 ฟัน ยาว ชุบ TiCN



SERIES E7659
PLAIN SHANK

Much longer flute length than E2402 & 2403
(C4ORS & C6ORS) type allows deeper &
wider cutting.

HSS
Co8

FLUTE
4 & 6

TiCN



Cutting Data ดูหน้า 60

Unit : mm

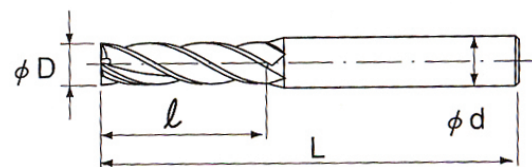
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2008030	E7659030	3.0	6	15	60	650
YG-2008040	E7659040	4.0	8	20	70	740
YG-2008050	E7659050	5.0	8	25	75	740
YG-2008060	E7659060	6.0	8	25	75	740
YG-2008070	E7659070	7.0	10	35	90	910
YG-2008080	E7659080	8.0	10	35	90	910
YG-2008090	E7659090	9.0	10	45	100	990
YG-2008100	E7659100	10.0	10	45	100	990
YG-2008110	E7659110	11.0	12	55	115	1,380
YG-2008120	E7659120	12.0	12	55	115	1,380
YG-2008130	E7659130	13.0	12	55	115	1,790
YG-2008140	E7659140	14.0	16	55	120	2,040
YG-2008150	E7659150	15.0	16	65	130	2,080
YG-2008160	E7659160	16.0	16	65	130	2,080
YG-2008170	E7659170	17.0	16	65	130	2,380
YG-2008180	E7659180	18.0	16	65	130	2,440
YG-2008190	E7659190	19.0	20	75	145	3,110
YG-2008200	E7659200	20.0	20	75	145	2,910
YG-2008210	E7659210	21.0	20	75	145	3,270

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2008220	E7659220	22.0	20	75	145	3,380
YG-2008230	E7659230	23.0	25	90	165	4,800
YG-2008240	E7659240	24.0	25	90	165	6,700
YG-2008250	E7659250	25.0	25	90	165	6,700
YG-2008260	E7659260	26.0	25	90	165	5,100
YG-2008270	E7659270	27.0	25	90	165	5,500
YG-2008280	E7659280	28.0	25	90	165	5,900
YG-2008290	E7659290	29.0	25	90	165	7,200
YG-2008300	E7659300	30.0	25	90	165	6,800
YG-2008320	E7659320	32.0	32	95	180	8,500
YG-2008340	E7659340	34.0	32	100	185	•
YG-2008350	E7659350	35.0	32	100	185	•
YG-2008360	E7659360	36.0	32	105	190	•
YG-2008380	E7659380	38.0	32	105	190	•
YG-2008400	E7659400	40.0	32	110	195	•
● YG-2008420	E7659420	42.0	42	115	200	•
● YG-2008450	E7659450	45.0	42	120	205	•
● YG-2008480	E7659480	48.0	42	125	215	•
● YG-2008500	E7659500	50.0	42	125	215	•

● 6 ฟัน • Order

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	+ 30 0					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 4 ฟัน ยาวพิเศษ



SERIES E2750
PLAIN SHANK

Much longer flute length than E2407(C4OLS)
type allows deeper & wider cutting.

Cutting Data คู่มือหน้า 60

HSS
Co8

FLUTE
4

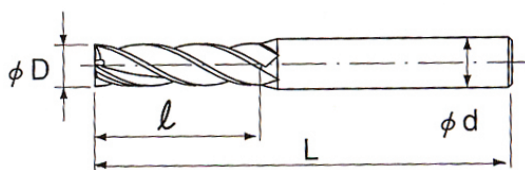


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2009160	E2750160	16.0	16	100	160	1,730
YG-2009180	E2750180	18.0	16	100	180	2,040
YG-2009200	E2750200	20.0	20	100	180	2,430
YG-2009901	E2750901	20.0	20	120	200	3,300
YG-2009902	E2750902	20.0	20	150	230	2,940
YG-2009220	E2750220	22.0	20	120	200	3,100
YG-2009240	E2750240	24.0	25	100	180	4,200
YG-2009903	E2750903	24.0	25	150	250	5,500
YG-2009250	E2750250	25.0	25	100	180	3,500
YG-2009904	E2750904	25.0	25	120	220	4,800
YG-2009905	E2750905	25.0	25	150	250	4,500
YG-2009260	E2750260	26.0	25	150	250	5,700
YG-2009280	E2750280	28.0	25	150	250	6,600

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2009300	E2750300	30.0	25	120	200	6,800
YG-2009906	E2750906	30.0	25	150	250	6,700
YG-2009907	E2750907	30.0	25	200	280	7,800
YG-2009320	E2750320	32.0	32	150	230	7,700
YG-2009908	E2750908	32.0	32	200	280	9,300
YG-2009350	E2750350	35.0	32	150	250	12,000
YG-2009909	E2750909	35.0	32	200	300	14,500
YG-2009360	E2750360	36.0	32	150	250	13,000
YG-2009380	E2750380	38.0	32	150	250	14,000
YG-2009400	E2750400	40.0	32	150	250	13,500
YG-2009910	E2750910	40.0	32	200	300	16,000
YG-2009450	E2750450	45.0	42	200	300	23,000
YG-2009500	E2750500	50.0	42	200	300	29,500

• Order

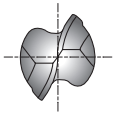


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	0 -30					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 2 ฟัน หัวบอล



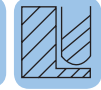
SERIES E2480
PLAIN SHANK

The two flute ball End Mills are designed for milling of radius bottom slot, fillets and special contours. The end teeth are cut to center allowing these end mills to drill into material at the beginning of a slotting cut. The two flute design provides good chip removal ability in slotting.

Cutting Data ดูหน้า 61

HSS
Co8

FLUTE
2



Unit : mm

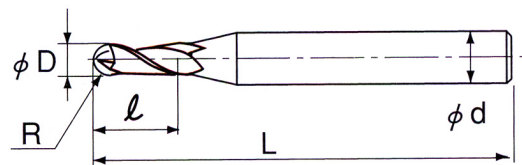
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2010010	E2480010	1.0	6	2.5	50	900
YG-2010015	E2480015	1.5	6	4	50	820
YG-2010020	E2480020	2.0	6	5	50	780
YG-2010025	E2480025	2.5	6	6	60	780
YG-2010030	E2480030	3.0	6	8	60	680
YG-2010901	E2480901	4.0	6	8	70	680
YG-2010902	E2480902	5.0	6	10	80	680
YG-2010903	E2480903	6.0	6	12	90	680
YG-2010904	E2480904	7.0	8	14	90	710
YG-2010905	E2480905	8.0	8	14	100	710
YG-2010090	E2480090	9.0	10	18	100	750
YG-2010100	E2480100	10.0	10	18	100	750
YG-2010110	E2480110	11.0	12	22	100	980
YG-2010120	E2480120	12.0	12	22	110	980
YG-2010130	E2480130	13.0	12	26	110	1,340
YG-2010906	E2480906	14.0	12	26	110	1,500
YG-2010907	E2480907	15.0	12	30	110	1,500
YG-2010160	E2480160	16.0	16	30	140	1,500

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2010170	E2480170	17.0	16	34	140	1,670
YG-2010180	E2480180	18.0	16	34	140	1,670
YG-2010190	E2480190	19.0	16	38	140	1,890
YG-2010200	E2480200	20.0	20	38	160	1,890
YG-2010210	E2480210	21.0	20	45	170	•
YG-2010220	E2480220	22.0	20	45	170	•
YG-2010230	E2480230	23.0	20	50	180	•
YG-2010908	E2480908	24.0	20	50	180	•
YG-2010240	E2480240	24.0	25	50	180	•
YG-2010250	E2480250	25.0	25	50	180	2,900
YG-2010260	E2480260	26.0	25	50	180	•
YG-2010270	E2480270	27.0	25	50	180	•
YG-2010280	E2480280	28.0	25	50	180	•
YG-2010300	E2480300	30.0	25	55	180	•
YG-2010320	E2480320	32.0	32	60	180	•
YG-2010350	E2480350	35.0	32	60	180	•
YG-2010400	E2480400	40.0	32	65	200	•
YG-2010500	E2480500	50.0	42	75	210	•

• Order

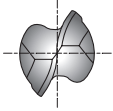
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	0 -0.030					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 2 ฟัน หัวบอล ชุบ TiCN



SERIES E7480
PLAIN SHANK

The two flute ball End Mills are designed for milling of radius bottom slot, fillets and special contours. The end teeth are cut to center allowing these end mills to drill into material at the beginning of a slotting cut. The two flute design provides good chip removal ability in slotting.

Cutting Data ดูหน้า 61

HSS
Co8

FLUTE
2

TiCN

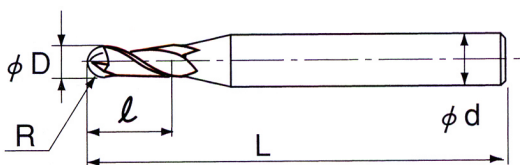


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2011010	E7480010	1.0	6	2.5	50	1,060
YG-2011015	E7480015	1.5	6	4	50	980
YG-2011020	E7480020	2.0	6	5	50	940
YG-2011025	E7480025	2.5	6	6	60	960
YG-2011030	E7480030	3.0	6	8	60	860
YG-2011901	E7480901	4.0	6	8	70	860
YG-2011902	E7480902	5.0	6	10	80	860
YG-2011903	E7480903	6.0	6	12	90	910
YG-2011904	E7480904	7.0	8	14	90	1,000
YG-2011905	E7480905	8.0	8	14	100	1,020
YG-2011090	E7480090	9.0	10	18	100	1,100
YG-2011100	E7480100	10.0	10	18	100	1,100
YG-2011110	E7480110	11.0	12	22	100	1,390
YG-2011120	E7480120	12.0	12	22	110	1,430
YG-2011130	E7480130	13.0	12	26	110	1,810
YG-2011906	E7480906	14.0	12	26	110	2,030
YG-2011907	E7480907	15.0	12	30	110	2,060
YG-2011160	E7480160	16.0	16	30	140	2,150

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2011170	E7480170	17.0	16	34	140	2,370
YG-2011180	E7480180	18.0	16	34	140	2,420
YG-2011190	E7480190	19.0	16	38	140	2,740
YG-2011200	E7480200	20.0	20	38	160	2,790
YG-2011210	E7480210	21.0	20	45	170	•
YG-2011220	E7480220	22.0	20	45	170	•
YG-2011230	E7480230	23.0	20	50	180	•
YG-2011908	E7480908	24.0	20	50	180	•
YG-2011240	E7480240	24.0	25	50	180	•
YG-2011250	E7480250	25.0	25	50	180	4,200
YG-2011260	E7480260	26.0	25	50	180	•
YG-2011270	E7480270	27.0	25	50	180	•
YG-2011280	E7480280	28.0	25	50	180	•
YG-2011300	E7480300	30.0	25	55	180	•
YG-2011320	E7480320	32.0	32	60	180	•
YG-2011350	E7480350	35.0	32	60	180	•
YG-2011400	E7480400	40.0	32	65	200	•
YG-2011500	E7480500	50.0	42	75	210	•

• Order

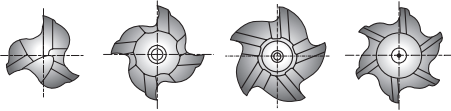


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	0 -0.030					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 กัดหยาบ ยาว



SERIES E2752 & E2759
PLAIN SHANK

Much longer flute design than E2758 type
allows deeper & wider cutting.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3 - 6



Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2012060	E2752060	6.0	6	24	68	1,150
■ YG-2012080	E2752080	8.0	10	38	88	1,250
YG-2012100	E2759100	10.0	10	45	95	1,330
YG-2012120	E2759120	12.0	12	53	110	1,600
YG-2012140	E2759140	14.0	12	53	110	1,860
YG-2012160	E2759160	16.0	16	63	123	2,170
YG-2012180	E2759180	18.0	16	63	123	2,330
YG-2012200	E2759200	20.0	20	75	141	2,510
★ YG-2012220	E2759220	22.0	20	75	141	3,160

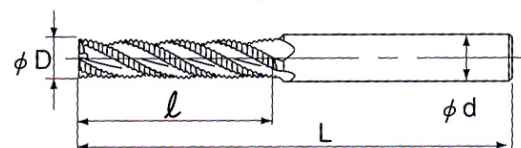
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
★ YG-2012250	E2759250	25.0	25	90	166	4,000
★ YG-2012280	E2759280	28.0	25	90	166	5,000
● YG-2012300	E2759300	30.0	25	90	166	5,500
● YG-2012320	E2759320	32.0	32	106	186	6,800
● YG-2012350	E2759350	35.0	32	106	186	11,500
● YG-2012360	E2759360	36.0	32	106	186	12,000
● YG-2012400	E2759400	40.0	32	125	205	13,500
● YG-2012450	E2759450	45.0	42	125	227	17,500
● YG-2012500	E2759500	50.0	42	150	252	20,000

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

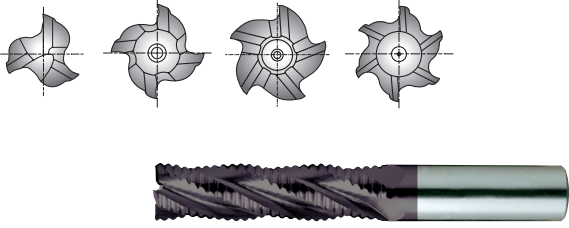
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	± 120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 กัดหยาบ ยาว ชุบ TiCN



SERIES E2752 & E2759
PLAIN SHANK

Much longer flute design than E2758 type
allows deeper & wider cutting.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3-6

TiCN



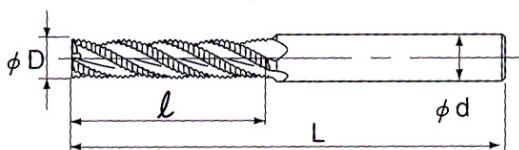
Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2013060	E7752060	6.0	6	24	68	1,320
■ YG-2013080	E7752080	8.0	10	38	88	1,550
■ YG-2013100	E7759100	10.0	10	45	95	1,660
■ YG-2013120	E7759120	12.0	12	53	110	2,050
■ YG-2013140	E7759140	14.0	12	53	110	2,390
■ YG-2013160	E7759160	16.0	16	63	123	2,800
■ YG-2013180	E7759180	18.0	16	63	123	3,050
■ YG-2013200	E7759200	20.0	20	75	141	3,410
★ YG-2013220	E7759220	22.0	20	75	141	4,220

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
★ YG-2013250	E7759250	25.0	25	90	166	5,300
★ YG-2013280	E7759280	28.0	25	90	166	6,700
● YG-2013300	E7759300	30.0	25	90	166	7,300
● YG-2013320	E7759320	32.0	32	106	186	9,100
● YG-2013350	E7759350	35.0	32	106	186	15,000
● YG-2013360	E7759360	36.0	32	106	186	15,500
● YG-2013400	E7759400	40.0	32	125	205	19,000
● YG-2013450	E7759450	45.0	42	125	227	25,500
● YG-2013500	E7759500	50.0	42	150	252	.

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

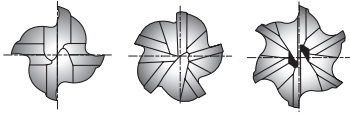


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	± 120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 กัดหยาบ Center Cut



SERIES E2760
FLAT SHANK

This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous material.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
4 - 6



Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2014060	E2760060	6.0	8	15	60	1,000
YG-2014070	E2760070	7.0	10	20	65	1,160
YG-2014080	E2760080	8.0	10	20	65	1,030
YG-2014090	E2760090	9.0	12	25	75	1,280
YG-2014100	E2760100	10.0	12	25	75	1,200
YG-2014110	E2760110	11.0	12	30	80	1,350
YG-2014120	E2760120	12.0	12	30	80	1,240
YG-2014130	E2760130	13.0	16	35	90	1,580
YG-2014140	E2760140	14.0	16	35	90	1,520
YG-2014150	E2760150	15.0	16	40	95	1,770
YG-2014160	E2760160	16.0	16	40	95	1,770
YG-2014170	E2760170	17.0	20	40	105	1,900
YG-2014180	E2760180	18.0	20	40	105	1,900
YG-2014190	E2760190	19.0	20	45	110	2,250
YG-2014200	E2760200	20.0	20	45	110	2,040
★ YG-2014210	E2760210	21.0	20	45	110	2,710
★ YG-2014220	E2760220	22.0	20	45	110	2,580
★ YG-2014230	E2760230	23.0	25	50	120	3,300
★ YG-2014240	E2760240	24.0	25	50	120	3,300
★ YG-2014250	E2760250	25.0	25	50	120	3,300
● YG-2014260	E2760260	26.0	25	50	120	3,600
● YG-2014270	E2760270	27.0	25	55	125	3,900

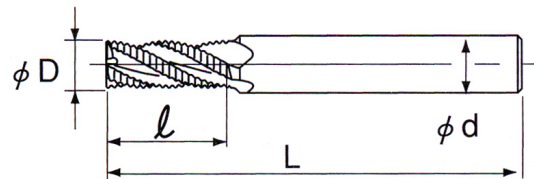
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
● YG-2014280	E2760280	28.0	25	55	125	4,100
● YG-2014290	E2760290	29.0	25	55	125	4,700
● YG-2014300	E2760300	30.0	25	55	125	4,500
● YG-2014310	E2760310	31.0	32	60	145	6,750
● YG-2014320	E2760320	32.0	32	60	145	5,600
● YG-2014330	E2760330	33.0	32	60	145	8,000
● YG-2014340	E2760340	34.0	32	60	145	8,500
● YG-2014350	E2760350	35.0	32	60	145	9,000
● YG-2014360	E2760360	36.0	32	60	145	9,500
● YG-2014370	E2760370	37.0	32	65	150	11,500
● YG-2014380	E2760380	38.0	32	65	150	11,000
● YG-2014390	E2760390	39.0	32	65	150	11,500
● YG-2014400	E2760400	40.0	32	65	150	11,000
● YG-2014420	E2760420	42.0	32	65	155	13,000
● YG-2014942	E2760942	42.0	42	65	155	13,000
● YG-2014450	E2760450	45.0	32	70	160	14,500
● YG-2014945	E2760945	45.0	42	70	160	14,500
● YG-2014480	E2760480	48.0	32	70	160	16,000
● YG-2014948	E2760948	48.0	42	70	160	16,000
● YG-2014500	E2760500	50.0	32	70	160	16,500
● YG-2014950	E2760950	50.0	42	70	160	16,500

★ 5 ฟัน ● 6 ฟัน

● Order

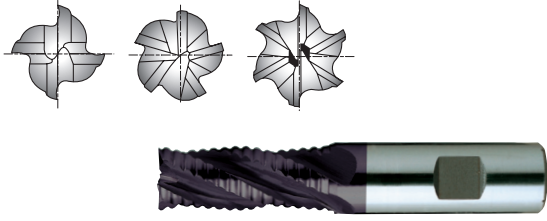
Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	± 120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} : 1/1000\text{mm}$

YG ดอกเอ็นมิล HSS Co8 กัดหยาบ Center Cut ชูบ TiCN



SERIES E7760
FLAT SHANK

This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is recommended for cutting steel grades and many non-ferrous material.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
4 - 6

TiCN

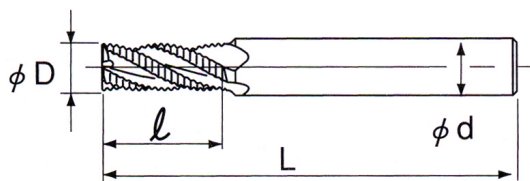


Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2015060	E7760060	6.0	8	15	60	1,210
YG-2015070	E7760070	7.0	10	20	65	1,370
YG-2015080	E7760080	8.0	10	20	65	1,250
YG-2015090	E7760090	9.0	12	25	75	1,590
YG-2015100	E7760100	10.0	12	25	75	1,510
YG-2015110	E7760110	11.0	12	30	80	1,730
YG-2015120	E7760120	12.0	12	30	80	1,620
YG-2015130	E7760130	13.0	16	35	90	2,100
YG-2015140	E7760140	14.0	16	35	90	2,040
YG-2015150	E7760150	15.0	16	40	95	2,310
YG-2015160	E7760160	16.0	16	40	95	2,310
YG-2015170	E7760170	17.0	20	40	105	2,480
YG-2015180	E7760180	18.0	20	40	105	2,650
YG-2015190	E7760190	19.0	20	45	110	3,000
YG-2015200	E7760200	20.0	20	45	110	2,800
★ YG-2015210	E7760210	21.0	20	45	110	3,500
★ YG-2015220	E7760220	22.0	20	45	110	3,450
★ YG-2015230	E7760230	23.0	25	50	120	4,300
★ YG-2015240	E7760240	24.0	25	50	120	4,300
★ YG-2015250	E7760250	25.0	25	50	120	4,300
● YG-2015260	E7760260	26.0	25	50	120	4,800
● YG-2015270	E7760270	27.0	25	55	125	5,100
● YG-2015280	E7760280	28.0	25	55	125	5,400
● YG-2015290	E7760290	29.0	25	55	125	6,200
● YG-2015300	E7760300	30.0	25	55	125	6,000
● YG-2015310	E7760310	31.0	32	60	145	9,000
● YG-2015320	E7760320	32.0	32	60	145	7,400
● YG-2015330	E7760330	33.0	32	60	145	10,500
● YG-2015340	E7760340	34.0	32	60	145	11,000
● YG-2015350	E7760350	35.0	32	60	145	12,000
● YG-2015360	E7760360	36.0	32	60	145	13,000
● YG-2015370	E7760370	37.0	32	65	150	15,000
● YG-2015380	E7760380	38.0	32	65	150	14,500
● YG-2015390	E7760390	39.0	32	65	150	15,500
● YG-2015400	E7760400	40.0	32	65	150	15,500
● YG-2015420	E7760420	42.0	32	65	155	17,500
● YG-2015942	E7760942	42.0	42	65	155	17,500
● YG-2015450	E7760450	45.0	32	70	160	20,000
● YG-2015945	E7760945	45.0	42	70	160	20,000
● YG-2015480	E7760480	48.0	32	70	160	22,000
● YG-2015948	E7760948	48.0	42	70	160	22,000
● YG-2015500	E7760500	50.0	32	70	160	23,000
● YG-2015950	E7760950	50.0	42	70	160	23,000

★ 5 ฟัน ● 6 ฟัน

• Order

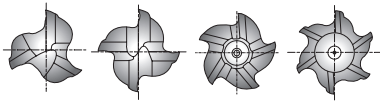


μm : 1/1000mm

Tolerances according to DIN 7160 & 7161

Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
MILL DIA. TOLERANCE	± 120					
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด สั้น



SERIES E2753
FLAT SHANK

This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3 - 6



Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2016060	E2753060	6.0	6	13	57	980
■ YG-2016080	E2753080	8.0	10	19	69	1,050
■ YG-2016100	E2753100	10.0	10	22	72	1,050
■ YG-2016120	E2753120	12.0	12	26	83	1,150
■ YG-2016140	E2753140	14.0	12	26	83	1,470
■ YG-2016160	E2753160	16.0	16	32	92	1,640
■ YG-2016180	E2753180	18.0	16	32	92	1,730

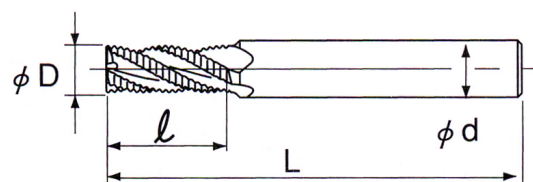
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2016200	E2753200	20.0	20	38	104	1,990
★ YG-2016250	E2753250	25.0	25	45	121	3,100
● YG-2016300	E2753300	30.0	25	45	121	4,500
● YG-2016320	E2753320	32.0	32	53	133	5,000
● YG-2016350	E2753350	35.0	32	53	133	9,000
● YG-2016400	E2753400	40.0	32	63	155	10,000

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

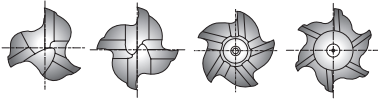
Tolerances according to DIN 7160 & 7161

Toleranzwerte in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} = 1/1000 \text{ mm}$

YG ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด สัน ชุบ TiCN



SERIES E7753
FLAT SHANK

This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3 - 6

TiCN



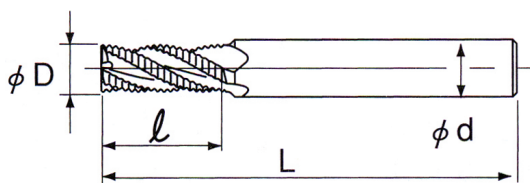
Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2017060	E7753060	6.0	6	13	57	1,160
■ YG-2017080	E7753080	8.0	10	19	69	1,250
■ YG-2017100	E7753100	10.0	10	22	72	1,280
■ YG-2017120	E7753120	12.0	12	26	83	1,530
■ YG-2017140	E7753140	14.0	12	26	83	1,860
■ YG-2017160	E7753160	16.0	16	32	92	2,190
■ YG-2017180	E7753180	18.0	16	32	92	2,310

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2017200	E7753200	20.0	20	38	104	2,740
★ YG-2017250	E7753250	25.0	25	45	121	4,200
● YG-2017300	E7753300	30.0	25	45	121	6,100
● YG-2017320	E7753320	32.0	32	53	133	6,800
● YG-2017350	E7753350	35.0	32	53	133	12,000
● YG-2017400	E7753400	40.0	32	63	155	14,500

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

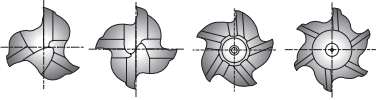


μm = 1/1000 mm

Tolerances according to DIN 7160 & 7161

Toleranzwerte in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด ยาว



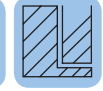
SERIES E2762
FLAT SHANK

This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality. Much longer flute than design than E2753 type allows deeper and wider cutting.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3 - 6



Unit : mm

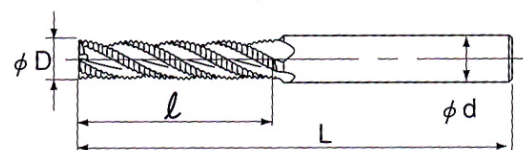
รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท	รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2018060	E2762060	6.0	6	24	68	1,260	YG-2018200	E2762200	20.0	20	75	141	2,870
■ YG-2018070	E2762070	7.0	10	30	80	1,360	★ YG-2018220	E2762220	22.0	20	75	141	4,000
■ YG-2018080	E2762080	8.0	10	38	88	1,360	★ YG-2018240	E2762240	24.0	25	90	166	4,400
■ YG-2018090	E2762090	9.0	10	38	88	1,360	★ YG-2018250	E2762250	25.0	25	90	166	4,400
YG-2018100	E2762100	10.0	10	45	95	1,360	● YG-2018260	E2762260	26.0	25	90	166	4,800
YG-2018110	E2762110	11.0	12	45	102	1,570	● YG-2018280	E2762280	28.0	25	90	166	5,800
YG-2018120	E2762120	12.0	12	53	110	1,570	● YG-2018300	E2762300	30.0	25	90	166	6,700
YG-2018130	E2762130	13.0	12	53	110	2,200	● YG-2018320	E2762320	32.0	32	106	186	7,100
YG-2018140	E2762140	14.0	12	53	110	2,200	● YG-2018350	E2762350	35.0	32	106	186	10,500
YG-2018150	E2762150	15.0	12	53	110	2,300	● YG-2018360	E2762360	36.0	32	106	186	10,500
YG-2018160	E2762160	16.0	16	63	123	2,300	● YG-2018380	E2762380	38.0	32	125	217	12,000
YG-2018170	E2762170	17.0	16	63	123	2,610	● YG-2018938	E2762938	38.0	40	125	217	12,000
YG-2018180	E2762180	18.0	16	63	123	2,610	● YG-2018400	E2762400	40.0	32	125	217	12,500
YG-2018190	E2762190	19.0	16	63	123	2,870	● YG-2018940	E2762940	40.0	40	125	217	12,500

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

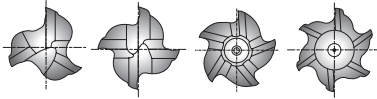
Tolerances according to DIN 7160 & 7161

Toleranzwerte in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16



$\mu\text{m} = 1/1000 \text{ mm}$

YG ดอกเอ็นมิล HSS Co8 กัดหยาบพื้นละเอียด ยาว ชุบ TiCN



SERIES E7762
FLAT SHANK

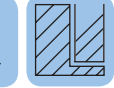
This general purpose rougher is designed for high production metal removal in a wide range of work piece material. It is suitable for a very broad spectrum of materials having up to high tensile strengths. In many cases, the milled surfaces are of acceptable quality. Much longer flute than design than E2753 type allows deeper and wider cutting.

Cutting Data ดูหน้า 62

HSS
Co8

FLUTE
3 - 6

TiCN



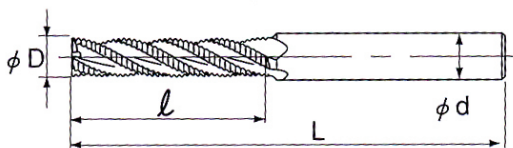
Unit : mm

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
■ YG-2019060	E7762060	6.0	6	24	68	1,440
■ YG-2019070	E7762070	7.0	10	30	80	• 2,000
■ YG-2019080	E7762080	8.0	10	38	88	1,680
■ YG-2019090	E7762090	9.0	10	38	88	• 2,100
YG-2019100	E7762100	10.0	10	45	95	1,700
YG-2019110	E7762110	11.0	12	45	102	• 2,450
YG-2019120	E7762120	12.0	12	53	110	2,020
YG-2019130	E7762130	13.0	12	53	110	• 3,250
YG-2019140	E7762140	14.0	12	53	110	2,730
YG-2019150	E7762150	15.0	12	53	110	• 3,500
YG-2019160	E7762160	16.0	16	63	123	2,930
YG-2019170	E7762170	17.0	16	63	123	• 4,000
YG-2019180	E7762180	18.0	16	63	123	3,340
YG-2019190	E7762190	19.0	16	63	123	• 4,500

รหัสสินค้า	EDP No.	D	d h6	ℓ	L	อัน / บาท
YG-2019200	E7762200	20.0	20	75	141	3,780
★ YG-2019220	E7762220	22.0	20	75	141	5,020
★ YG-2019240	E7762240	24.0	25	90	166	• 7,000
★ YG-2019250	E7762250	25.0	25	90	166	5,700
● YG-2019260	E7762260	26.0	25	90	166	• 8,000
● YG-2019280	E7762280	28.0	25	90	166	• 9,000
● YG-2019300	E7762300	30.0	25	90	166	8,600
● YG-2019320	E7762320	32.0	32	106	186	9,400
● YG-2019350	E7762350	35.0	32	106	186	• 14,000
● YG-2019360	E7762360	36.0	32	106	186	• 14,500
● YG-2019380	E7762380	38.0	32	125	217	• 16,500
● YG-2019938	E7762938	38.0	40	125	217	• 18,000
● YG-2019400	E7762400	40.0	32	125	217	• 19,000
● YG-2019940	E7762940	40.0	40	125	217	• 19,000

■ 3 ฟัน ★ 5 ฟัน ● 6 ฟัน

• Order

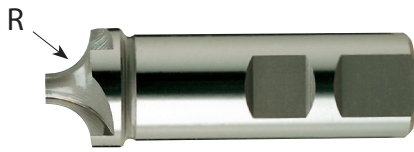


μm = 1/1000 mm

Tolerances according to DIN 7160 & 7161

Toleranzwerte in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

YG เอ็นมิลคัตเตอร์ HSS Co8 มุม R



SERIES E2498
FLAT SHANK

This general corner rounding end mills are designed for machining fillets on work piece.

HSS
Co8

DIN
6518

N

FLUTE
4



Unit : mm

รหัสสินค้า	EDP No.	Radius H11	Outer DIA	d h6	L	อัน / บาท
YG-2020010	E2498010	1.0	8	10	60	1,680
YG-2020015	E2498015	1.5	9	10	60	1,680
YG-2020020	E2498020	2.0	10	10	60	1,680
YG-2020025	E2498025	2.5	11	10	60	1,750
YG-2020030	E2498030	3.0	12	12	60	1,930
YG-2020035	E2498035	3.5	13	12	60	1,930
YG-2020040	E2498040	4.0	14	12	60	2,060
YG-2020045	E2498045	4.5	15	12	60	2,170
YG-2020050	E2498050	5.0	16	12	60	2,240
YG-2020055	E2498055	5.5	19	16	67	2,240
YG-2020060	E2498060	6.0	20	16	67	2,450
YG-2020065	E2498065	6.5	21	16	71	2,880
YG-2020070	E2498070	7.0	22	16	71	2,880
YG-2020075	E2498075	7.5	23	16	71	2,880
YG-2020080	E2498080	8.0	24	16	71	3,220

รหัสสินค้า	EDP No.	Radius H11	Outer DIA	d h6	L	อัน / บาท
YG-2020085	E2498085	8.5	25	25	85	4,150
YG-2020090	E2498090	9.0	26	25	85	4,150
YG-2020095	E2498095	9.5	27	25	85	4,150
YG-2020100	E2498100	10.0	28	25	85	4,150
YG-2020105	E2498105	10.5	31	25	90	5,830
YG-2020110	E2498110	11.0	32	25	90	5,830
YG-2020120	E2498120	12.0	34	25	90	5,830
YG-2020125	E2498125	12.5	41	25	100	6,990
YG-2020130	E2498130	13.0	42	25	100	6,990
YG-2020140	E2498140	14.0	44	25	100	6,990
YG-2020150	E2498150	15.0	46	25	100	10,180
YG-2020160	E2498160	16.0	48	25	100	10,180
YG-2020180	E2498180	18.0	52	32	112	10,180
YG-2020200	E2498200	20.0	56	32	112	14,500

Tolerances according to DIN 7160 & 7161

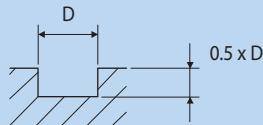
Toleranzwerte in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
H11	+60 0	+75 0	+90 0	+110 0	+130 0	+160 0
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

$\mu\text{m} = 1/1000 \text{ mm}$

2FL. FINISH, SLOTTING

E2401, E2406

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
	HARDNESS	~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40				
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5600	40	4500	30	4000	30	2200	15	12000	160
3	3500	55	3200	45	2500	40	1600	20	11000	250
4	2800	70	2200	55	1800	45	1100	30	8000	290
5	2200	90	1800	70	1600	60	900	35	6300	310
6	1800	90	1600	80	1200	60	800	40	5600	310
8	1400	100	1100	90	900	70	560	45	4000	390
10	1100	100	900	90	800	80	450	45	3100	400
12	900	110	800	100	630	80	400	50	2500	380
14	800	110	700	90	560	80	350	50	2200	350
16	700	110	560	90	450	70	280	45	2000	350
18	630	100	500	90	400	70	250	45	1800	350
20	560	100	450	90	400	70	220	45	1600	320
22	500	100	450	90	350	70	220	45	1400	300
25	450	90	400	80	310	60	180	35	1200	280
28	400	80	350	70	280	55	160	30	1100	270
30	350	70	310	60	250	50	160	30	1100	270
32	350	70	280	55	220	45	140	30	1000	240
36	310	60	250	50	200	40	120	25	900	220
40	280	60	220	50	180	40	110	25	800	200

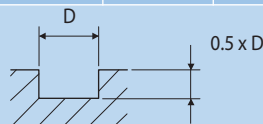


** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

E7401, E7406

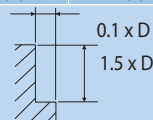
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
	HARDNESS	~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40				
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7300	50	6000	40	5000	40	2900	20	16000	210
3	4500	70	4200	60	3300	50	2100	25	14000	330
4	3600	90	2900	70	2300	60	1400	40	10000	380
5	2900	115	2300	90	2100	80	1200	45	8200	400
6	2300	115	2000	105	1600	80	1000	50	7300	400
8	1800	130	1400	115	1200	90	730	60	5000	510
10	1400	130	1200	115	1000	105	600	60	4000	520
12	1200	145	1000	130	800	105	500	65	3300	500
14	1000	145	900	115	700	105	450	65	2800	450
16	900	145	700	115	600	90	360	60	2600	450
18	800	130	650	115	500	90	320	60	2300	450
20	730	130	600	115	500	90	300	60	2100	420
22	650	130	600	115	450	90	280	60	1800	390
25	600	120	500	105	400	80	230	48	1600	360
28	500	105	450	90	350	70	210	40	1400	350
30	450	90	400	80	320	65	210	40	1400	350
32	450	90	360	70	280	60	180	40	1300	310
36	400	80	320	65	260	50	160	30	1200	280
40	360	80	280	65	230	50	140	30	1000	260



** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

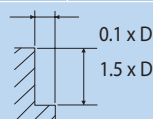
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5600	80	4500	55	4000	45	2200	20	12000	240
3	3500	110	3200	80	2500	60	1600	30	11000	380
4	2800	140	2200	100	1800	65	1100	45	8000	440
5	2200	180	1800	125	1600	90	900	50	6300	470
6	1800	180	1600	145	1200	90	800	60	5600	470
8	1400	200	1100	160	900	105	560	65	4000	580
10	1100	200	900	160	800	120	450	65	3100	600
12	900	220	800	180	630	120	400	75	2500	570
14	800	220	700	160	560	120	350	75	2200	530
16	700	220	560	160	450	105	280	65	2000	530
18	630	200	500	160	400	105	250	65	1800	530
20	560	200	450	160	400	105	220	65	1600	480
22	500	200	450	160	350	105	220	65	1400	450
25	450	180	400	145	310	90	180	50	1200	420
28	400	160	350	125	280	80	160	45	1100	400
30	350	140	310	110	250	75	160	45	1100	400
32	350	140	280	100	220	65	140	45	1000	360
36	310	120	250	90	200	60	120	35	900	330
40	280	120	220	90	180	60	110	35	800	300



RPM=rev/min. Feed=mm/min

E7402, E7659

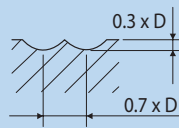
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	7300	105	6000	70	5000	60	2900	25	16000	310
3	4500	145	4200	105	3300	80	2100	40	14000	500
4	3600	180	2900	130	2300	85	1400	60	10000	570
5	2900	235	2300	160	2100	115	1200	65	8200	610
6	2300	235	2000	190	1600	115	1000	80	7300	610
8	1800	260	1400	210	1200	135	730	85	5000	750
10	1400	260	1200	210	1000	155	600	85	4000	780
12	1200	285	1000	235	800	155	500	95	3300	740
14	1000	285	900	210	700	155	450	95	2800	690
16	900	285	700	210	600	135	360	85	2600	690
18	800	260	650	210	500	135	320	85	2300	690
20	730	260	600	210	500	135	300	85	2100	620
22	650	260	600	210	450	135	280	85	1800	580
25	600	235	500	190	400	115	230	65	1600	550
28	500	210	450	160	350	105	210	60	1400	520
30	450	180	400	145	320	95	210	60	1400	520
32	450	180	360	130	280	85	180	60	1300	470
36	400	155	320	120	260	80	160	45	1200	430
40	360	155	280	120	230	80	140	45	1000	390



** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

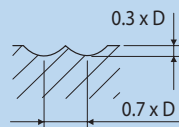
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.5 x 3.0	4500	95	3400	70	2000	30	1400	20	11000	230
R 2.0 x 4.0	3200	115	2400	80	1400	35	1000	25	8000	260
R 3.0 x 6.0	2200	135	1700	90	1000	45	700	25	5600	280
R 4.0 x 8.0	1600	160	1200	105	700	50	500	30	4000	350
R 5.0 x 10.0	1300	180	1000	120	560	60	400	35	3200	360
R 6.0 x 12.0	1000	170	800	105	450	55	320	35	2500	340
R 8.0 x 16.0	800	150	600	100	350	55	250	35	2000	300
R10.0 x 20.0	600	140	500	85	300	50	200	35	1600	280
R12.5 x 25.0	500	130	400	70	220	40	160	30	1300	250



** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.5 x 3.0	6000	125	4400	90	2600	40	1800	25	14000	300
R 2.0 x 4.0	4000	150	3100	105	1800	45	1300	30	10000	340
R 3.0 x 6.0	3000	175	2200	115	1300	60	900	30	7300	360
R 4.0 x 8.0	2000	210	1600	135	900	65	650	40	5000	450
R 5.0 x 10.0	1700	235	1300	155	730	80	500	45	4000	470
R 6.0 x 12.0	1300	220	1000	135	600	70	400	45	3300	440
R 8.0 x 16.0	1000	200	800	130	450	70	300	45	2600	390
R 10.0 x 20.0	800	180	650	110	400	65	250	45	2000	360
R 12.5 x 25.0	650	170	500	90	300	50	200	40	1700	330



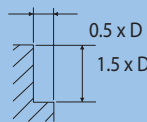
** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

MULTI FL., SIDE CUTTING, ROUGHING

E2759, E2760, E2753, E2762

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	1800	80	1600	60	1200	55	800	30	4500	200
8	1400	105	1100	75	900	65	560	35	3100	230
10	1100	150	900	120	800	110	450	60	2500	350
12	900	180	800	140	630	110	400	70	2000	400
14	800	180	700	140	560	110	350	70	1800	420
16	700	180	560	140	450	110	280	70	1600	450
18	630	180	500	140	400	110	250	70	1400	470
20	560	180	450	140	400	110	220	70	1200	500
22	500	220	450	170	350	140	220	85	1100	470
25	450	220	400	170	310	140	180	85	1000	450
28	400	210	350	160	280	130	160	85	900	510
30	350	210	310	160	250	130	160	85	900	530
32	350	210	280	160	220	130	140	85	800	500
36	310	210	250	160	200	130	120	85	700	470
40	280	200	220	150	180	120	110	80	630	450
50	220	200	180	170	160	140	90	80	500	370

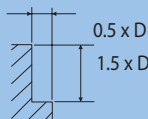


** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

E7759, E7760, E7753, E7762

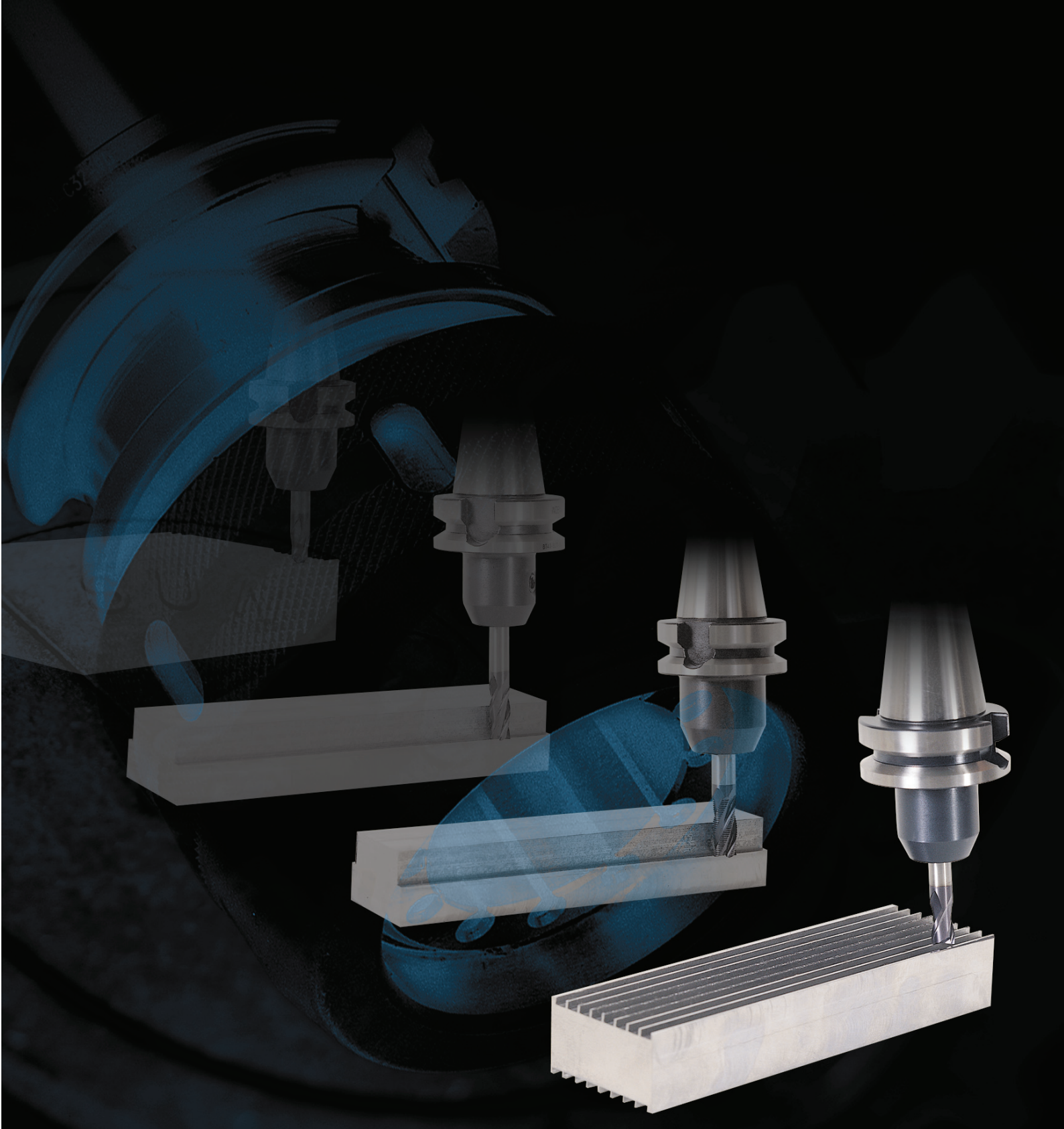
MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		ALUMINUM ALUMINUM ALLOYS	
HARDNESS			~ HRC20		HRC20 ~ HRC30		HRC30 ~ HRC40			
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2300	105	2000	80	1600	70	1000	40	6000	260
8	1800	135	1400	95	1200	85	700	45	4000	300
10	1400	195	1200	155	1000	145	600	80	3200	450
12	1200	235	1000	180	800	145	500	90	2600	520
14	1000	235	900	180	700	145	450	90	2300	550
16	900	235	700	180	600	145	350	90	2100	580
18	800	235	650	180	500	145	320	90	1800	610
20	700	235	600	180	500	145	300	90	1600	650
22	650	285	600	220	450	180	300	110	1400	610
25	600	285	500	220	400	180	230	110	1300	580
28	500	275	450	210	350	170	210	110	1200	660
30	450	275	400	210	320	170	210	110	1200	690
32	450	275	350	210	300	170	180	110	1000	650
36	400	275	320	210	250	170	150	110	900	610
40	350	260	300	195	230	155	140	105	800	280
50	300	260	230	220	200	180	120	105	650	480



** The FEED, in long & extra long types, should be reduced by around 50%

RPM=rev/min. Feed=mm/min

TANK-POWER



TANK-POWER END MILLS SELECTION GUIDE

แข็งแกร่งกว่า HSS, เหนียวกว่าคาร์ไบด์ อีกขั้นของนวัตกรรมใหม่ที่คุณต้องลอง !

#1 Choice Powerful Milling!! High Productivity!!

	EP931	ดอกเอ็นมิล TANK-POWER 2 ฟัน 2 FLUTE, REGULAR LENGTH	P. 65
	EP932	ดอกเอ็นมิล TANK-POWER 4 ฟัน 4 FLUTE, REGULAR LENGTH	P. 66
	EP933	ดอกเอ็นมิล TANK-POWER หัวบอล 2 ฟัน 2 FLUTE, BALL NOSE, REGULAR LENGTH	P. 67
	EP941	ดอกเอ็นมิล TANK-POWER กัดหยาบพื้นละเอียด สั้น MULTI FLUTE, ROUGHING, SHORT LENGTH	P. 68
SPEED & FEED DATA			P. 69

TANK-POWER Material Selection

Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
			~40 HRc	~50 HRc	~60 HRc	60 HRc~						
◎	◎	◎	◎				◎	◎		◎	◎	

YG ดอกเอ็นมิล TANK-POWER 2 ฟัน



SERIES EP931
PLAIN SHANK

Two-Flute design for slotting. Suitable for high speed cutting of difficult - to - cut materials, stainless steel, titanium, exotic materials. YG's new developed TANK-POWER Coating suitable for high speed cutting.

เหมาะสำหรับ High speed cutting ใช้ตัดวัสดุที่เหนียว ตัดยาก อย่างเช่น สแตนเลส, ไททาเนียม เป็นต้น

Cutting Data ดูหน้า 69

PREMIUM
PM

FLUTE
2



Unit : mm

รหัสสินค้า	EDP. No	MILL DIAMETER 0/-0.03	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-2501010	EP931010	1.0	6	2.5	55	840
YG-2501020	EP931020	2.0	6	6	55	670
YG-2501030	EP931030	3.0	6	10	55	670
YG-2501040	EP931040	4.0	8	12	60	730
YG-2501050	EP931050	5.0	8	15	65	730
YG-2501060	EP931060	6.0	8	15	65	730
YG-2501070	EP931070	7.0	10	20	75	970
YG-2501080	EP931080	8.0	10	20	75	970
YG-2501090	EP931090	9.0	10	25	80	1,050
YG-2501100	EP931100	10.0	10	25	80	1,050
YG-2501120	EP931120	12.0	12	30	90	1,400
YG-2501140	EP931140	14.0	12	35	95	1,950
YG-2501160	EP931160	16.0	16	40	105	2,030
YG-2501180	EP931180	18.0	16	40	105	2,460
YG-2501200	EP931200	20.0	20	45	115	3,170
YG-2501220	EP931220	22.0	20	45	115	3,220
YG-2501250	EP931250	25.0	25	50	125	4,800

MILL DIA. TOLERANCE	SHANK DIA. TOLERANCE
0 -0.03	h6

YG ดอกเอ็นมิล TANK-POWER 4 ฟัน



SERIES EP932
PLAIN SHANK

Recommended for pocketing, tracer milling, cam milling, die sinking and slotting. Designed for high speed cutting of difficult - to - cut materials, stainless steels, titanium, exotic materials. YG's new developed TANK-POWER Coating suitable for high speed cutting.

เหมาะสำหรับ High speed cutting ใช้ตัดวัสดุที่เหนียว ตัดยาก อย่างเช่น สแตนเลส, โททาเนียม เป็นต้น

Cutting Data ดูหน้า 69

PREMIUM
PM

FLUTE
4



Unit : mm

รหัสสินค้า	EDP. No	MILL DIAMETER +0.03/0	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-2502010	EP932010	1.0	6	2.5	55	840
YG-2502020	EP932020	2.0	6	6	55	670
YG-2502030	EP932030	3.0	6	10	55	670
YG-2502040	EP932040	4.0	8	12	60	730
YG-2502050	EP932050	5.0	8	15	65	730
YG-2502060	EP932060	6.0	8	15	65	730
YG-2502070	EP932070	7.0	10	20	75	970
YG-2502080	EP932080	8.0	10	20	75	970
YG-2502090	EP932090	9.0	10	25	80	1,050
YG-2502100	EP932100	10.0	10	25	80	1,050
YG-2502120	EP932120	12.0	12	30	90	1,400
YG-2502140	EP932140	14.0	12	35	95	1,950
YG-2502160	EP932160	16.0	16	40	105	2,030
YG-2502180	EP932180	18.0	16	40	105	2,460
YG-2502200	EP932200	20.0	20	45	115	3,170
YG-2502220	EP932220	22.0	20	45	115	3,220
YG-2502250	EP932250	25.0	25	50	125	4,800

MILL DIA. TOLERANCE	SHANK DIA. TOLERANCE
+0.03 0	h6

YG ดอกเอ็นมิล TANK-POWER หัวบอล 2 ฟัน



R : ± 0.02

SERIES EP933
PLAIN SHANK

Excellent performance on wide materials from carbon steels and stainless steels to aluminum. Designed for milling of radius bottom slots, fillets and special contours. YG's new developed TANK-POWER Coating suitable for high speed cutting.

เหมาะสำหรับ High speed cutting ใช้ตัดวัสดุที่เหนียว ตัดยาก อย่างเช่น สแตนเลส, โททาเนียม เป็นต้น

Cutting Data ดูหน้า 70

PREMIUM
PM

FLUTE
2



Unit : mm

รหัสสินค้า	EDP. No	MILL DIAMETER 0/-0.03	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-2503010	EP933010	1.0	6	2.5	50	1,390
YG-2503020	EP933020	2.0	6	5	50	1,230
YG-2503030	EP933030	3.0	6	8	60	1,100
YG-2503040	EP933040	4.0	6	8	70	1,100
YG-2503050	EP933050	5.0	6	10	80	1,140
YG-2503060	EP933060	6.0	6	12	90	1,180
YG-2503070	EP933070	7.0	8	14	90	1,340
YG-2503080	EP933080	8.0	8	14	100	1,390
YG-2503090	EP933090	9.0	10	18	100	1,460
YG-2503100	EP933100	10.0	10	18	100	1,460
YG-2503120	EP933120	12.0	12	22	110	1,900
YG-2503140	EP933140	14.0	12	26	110	2,640
YG-2503160	EP933160	16.0	16	30	140	2,930
YG-2503180	EP933180	18.0	16	34	140	3,510
YG-2503200	EP933200	20.0	20	38	160	4,540
YG-2503220	EP933220	22.0	20	45	170	5,020
YG-2503250	EP933250	25.0	25	50	180	6,800

MILL DIA. TOLERANCE	SHANK DIA. TOLERANCE
0 -0.03	h6

YG ดอกเอ็นมิล TANK-POWER กัดหยาบพื้นละเอียด สั้น



SERIES EP941
FLAT SHANK

Suitable for high-feed roughing milling.
Designed to machine carbon steels, alloyed steels, stainless steels.
Providing excellent finished surfaces in many cases.
YG's new developed TANK-POWER Coating suitable for high speed cutting.
up to $\phi 20$: center cut, over $\phi 20$: non center cut

Cutting Data ดูหน้า 70&71

PREMIUM
PM

FLUTE
3-5

DIN
844



Unit : mm

รหัสสินค้า	EDP. No	MILL DIAMETER 0/-0.03	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อัน / บาท
YG-2504060	EP941060	6.0	6	13	57	3	1,490
YG-2504070	EP941070	7.0	10	16	66	3	1,750
YG-2504080	EP941080	8.0	10	19	69	3	1,750
YG-2504090	EP941090	9.0	10	19	69	3	1,780
YG-2504100	EP941100	10.0	10	22	72	4	1,780
YG-2504120	EP941120	12.0	12	26	83	4	2,080
YG-2504140	EP941140	14.0	12	26	83	4	2,560
YG-2504160	EP941160	16.0	16	32	92	4	2,880
YG-2504180	EP941180	18.0	16	32	92	4	3,200
YG-2504200	EP941200	20.0	20	38	104	4	3,960
YG-2504220	EP941220	22.0	20	38	104	5	4,980
YG-2504250	EP941250	25.0	25	45	121	5	5,900

Tolerances according to DIN 7160 & 7161

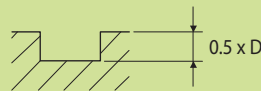
Tolerance range in μm						
Nominal-Diameter in mm						
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30	over 30 to 50
js12	± 50	± 60	± 75	± 90	± 105	± 125
h6	0 -6	0 -8	0 -9	0 -11	0 -13	0 -16

$\mu\text{m} = 1/1000\text{mm}$

2 FLUTE, REGULAR, SLOTTING

EP931

MATERIAL	STRUCTURAL STEELS CARBON STEELS		STRUCTURAL STEELS CARBON STEELS CAST IRONS		CARBON STEELS ALLOY STEELS TOOL STEELS		PREHARDENED STEELS ALLOY STEELS TOOL STEELS		ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS	
HARDNESS			~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc35		HRc35 ~ HRc40	
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1100N/mm ²		1100 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	6700	100	5600	80	4700	85	3000	55	1900	35
3	4700	140	3900	120	3200	100	2200	70	1700	55
4	4100	200	3400	155	3000	140	1900	80	1500	65
5	3700	220	3100	175	2500	160	1600	90	1300	65
6	3300	230	2750	185	2200	165	1400	95	1100	75
8	2500	240	2100	210	1700	175	1100	100	850	75
10	2000	260	1700	230	1400	200	850	110	670	90
12	1700	240	1400	210	1100	180	700	100	550	75
14	1500	230	1200	200	950	170	600	95	480	70
16	1300	230	1100	185	850	155	530	90	420	70
18	1100	210	900	170	750	140	480	85	380	65
20	900	190	750	145	670	130	420	80	340	60
22	800	160	680	130	570	110	380	70	300	50
25	720	135	600	120	470	100	340	65	240	45

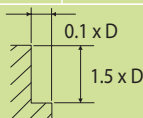


RPM=rev/min Feed=mm/min

4 FLUTE, REGULAR, SIDE CUTTING

EP932

MATERIAL	STRUCTURAL STEELS CARBON STEELS		STRUCTURAL STEELS CARBON STEELS CAST IRONS		CARBON STEELS ALLOY STEELS TOOL STEELS		PREHARDENED STEELS ALLOY STEELS TOOL STEELS		ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS	
HARDNESS			~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc35		HRc35 ~ HRc40	
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1100N/mm ²		1100 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	8800	250	8000	210	5800	150	3900	110	3200	75
3	6300	360	5700	300	4200	220	2800	155	2300	110
4	5000	420	4500	350	3400	260	2200	175	1900	130
5	4200	440	3800	370	2800	275	1900	190	1600	140
6	3700	470	3400	390	2500	285	1700	200	1400	155
8	3000	500	2500	420	1900	320	1300	210	1100	160
10	2200	550	2000	460	1500	330	1000	230	850	175
12	1900	500	1700	420	1300	320	850	210	690	160
14	1700	480	1500	400	1100	300	750	200	600	150
16	1550	440	1300	370	950	290	650	190	520	145
18	1400	400	1200	350	850	270	600	170	480	130
20	1200	380	1000	320	750	240	500	155	420	120
22	1000	360	900	280	650	220	450	140	380	115
25	950	320	800	265	600	200	400	130	340	110

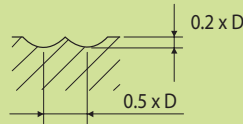


RPM=rev/min Feed=mm/min

2 FLUTE, BALL NOSE, PROFILING

EP933

MATERIAL	STRUCTURAL STEELS CARBON STEELS		STRUCTURAL STEELS CARBON STEELS CAST IRONS		CARBON STEELS ALLOY STEELS TOOL STEELS		PREHARDENED STEELS ALLOY STEELS TOOL STEELS	
HARDNESS			~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc40	
STRENGTH	~500N/mm ²		500 ~ 800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R1.5 x 3.0	7000	300	5500	200	3700	110	1900	50
R2.0 x 4.0	5700	370	4400	250	2900	140	1500	65
R3.0 x 6.0	4200	420	3300	280	2200	155	1150	75
R4.0 x 8.0	3200	460	2500	310	1700	175	850	75
R5.0 x10.0	2600	520	2000	350	1350	200	650	90
R6.0 x12.0	2200	460	1700	310	1150	175	550	75
R8.0 x16.0	1600	420	1250	280	850	155	420	70
R10.0 x 20.0	1300	360	1000	240	650	130	340	60
R12.5 x 25.0	900	270	700	180	450	100	240	45

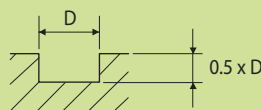


RPM=rev/min Feed=mm/min

MULTI FLUTE, SHORT, ROUGHING, SLOTTING

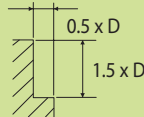
EP941

MATERIAL	STRUCTURAL STEELS CARBON STEELS CAST IRONS		CARBON STEELS ALLOY STEELS TOOL STEELS		PREHARDENED STEELS ALLOY STEELS TOOL STEELS		ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS	
HARDNESS	~HRc20		HRc20 ~ HRc30		HRc30 ~ HRc35		HRc35 ~ HRc40	
STRENGTH	~800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1100N/mm ²		1100 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2700	150	2100	115	1500	75	1250	65
8	2300	185	1800	150	1300	405	1000	80
10	1800	270	1400	205	1000	125	850	105
12	1500	270	1150	215	850	150	700	115
14	1300	270	1000	215	720	150	600	115
16	1150	270	900	215	625	150	520	115
18	1000	270	850	215	580	150	470	115
20	920	275	720	215	500	150	420	115
22	850	275	620	215	450	150	380	115
25	750	270	570	205	400	140	340	115



RPM=rev/min Feed=mm/min

MATERIAL	STRUCTURAL STEELS CARBON STEELS		STRUCTURAL STEELS CARBON STEELS CAST IRONS		PREHARDENED STEELS ALLOY STEELS TOOL STEELS		ALLOY STEELS TOOL STEELS AUSTENITIC STAINLESS STEELS	
HARDNESS	HRC20		HRC20 ~ HRC30		HRC30 ~ HRC35		HRC35 ~ HRC40	
STRENGTH	~800N/mm ²		800 ~ 1000N/mm ²		1000 ~ 1100N/mm ²		1100 ~ 1300N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2700	200	2100	155	1500	100	1250	90
8	2300	250	1800	200	1300	140	1000	110
10	1800	360	1400	275	1000	170	850	140
12	1500	360	1150	290	850	200	700	155
14	1300	360	1000	290	720	200	600	155
16	1150	360	900	290	625	200	520	155
18	1000	360	850	290	580	200	470	155
20	920	370	720	290	500	200	420	155
22	850	370	620	290	450	200	380	155
25	750	360	570	275	400	190	340	155



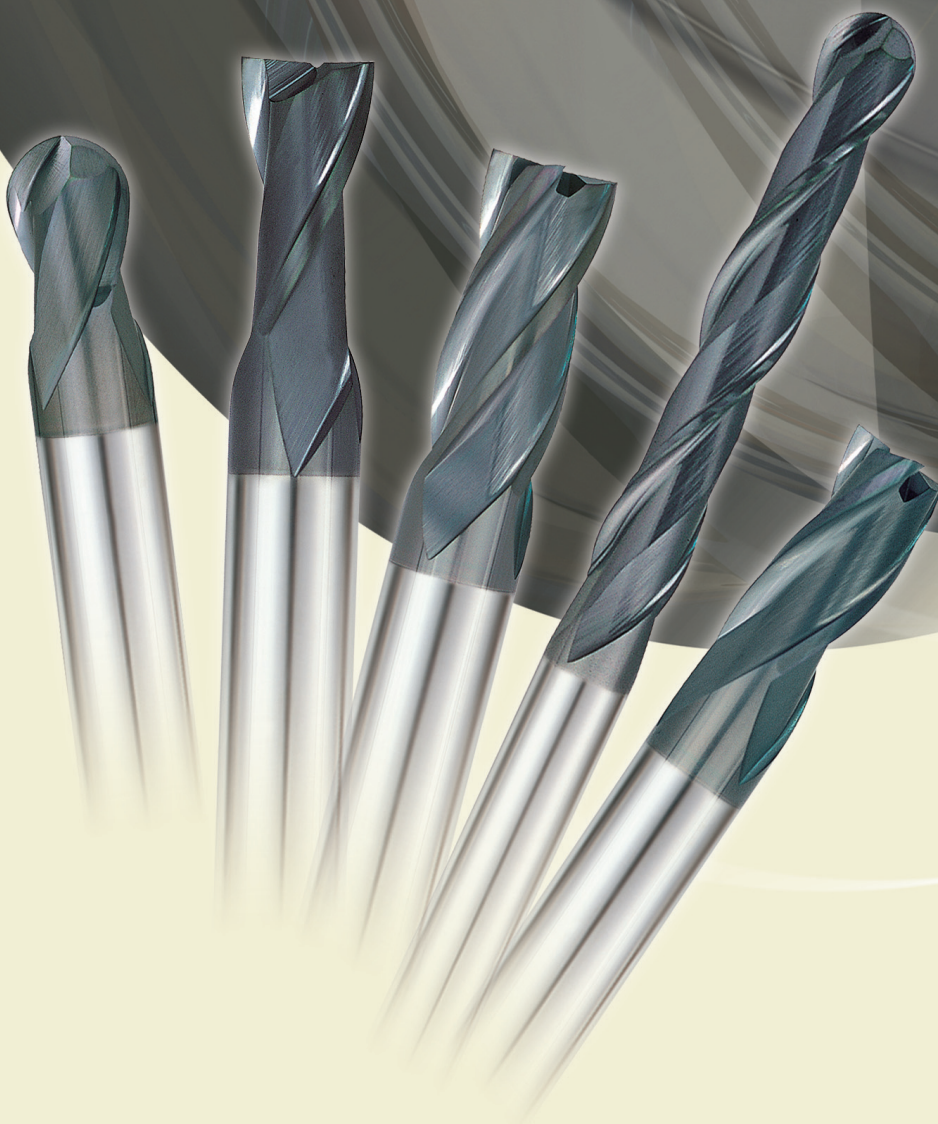
RPM=rev/min Feed=mm/min

K-2 END MILLS








K-2 is micro grain size carbide end mills for general purpose such as slotting, side cutting and profiling.

K-2 end mills get you increased productivity and decreased tooling cost with satisfaction.

Improved hot hardness and oxidation resistance will meet your needs in dry milling applications at high temperatures.



CONTENTS

G9A68		ดอกเอ็นมิล K2 2 ฟัน สั้น 2 FLUTE, SHORT LENGTH	P.74
G9452		ดอกเอ็นมิล K2 2 ฟัน ยาวพิเศษ 2 FLUTE, EXTRA LONG LENGTH	P.75
G9A69		ดอกเอ็นมิล K2 4 ฟัน สั้น 4 FLUTE, SHORT LENGTH	P.76
G9453		ดอกเอ็นมิล K2 4 ฟัน ยาวพิเศษ 4 FLUTE, EXTRA LONG LENGTH	P.77
G9A70		ดอกเอ็นมิล K2 2 ฟัน หัวบอล สั้น 2 FLUTE, BALL NOSE, SHORT LENGTH	P.78
G9454		ดอกเอ็นมิล K2 2 ฟัน หัวบอล ยาว 2 FLUTE, BALL NOSE, LONG REACH	P.79
G9A42		ดอกเอ็นมิล K2 กัดหยาบ ยาว MULTI FLUTE, COARSE PITCH ROUGHING, LONG LENGTH	P.80
RECOMMENDED CUTTING CONDITIONS			P.81

K2 Material Selection

Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
			~40 HRc	~50 HRc	~60 HRc	60 HRc~						
◎	◎	◎	◎	○			◎	◎	◎	◎		

YG ดอกเอ็นมิล K2 2 ฟัน สั้น

2 FLUTE, SHORT LENGTH

G9A68 SERIES

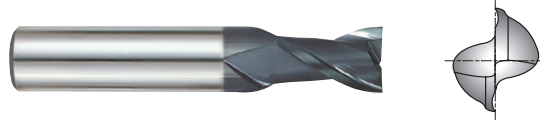
PLAIN SHANK



Cutting Data ดูหน้า 81

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ 2 flute design for slotting.

- ◆ เหมาะสำหรับงานกัดแห้งที่อุณหภูมิสูง
- ◆ ประสิทธิภาพการทำงานดีเลิศ
- ◆ 2 ฟัน ออกแบบเพื่องานเดินร่อง



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3001010	G9A68010	1.0	3	3	39	640
YG-3001015	G9A68015	1.5	3	5	39	600
YG-3001020	G9A68020	2.0	3	7	39	600
YG-3001025	G9A68025	2.5	3	7	39	600
YG-3001030	G9A68030	3.0	3	9	39	600
YG-3001040	G9A68040	4.0	4	14	51	750
YG-3001050	G9A68050	5.0	5	16	51	820
YG-3001060	G9A68060	6.0	6	19	64	1,020
YG-3001080	G9A68080	8.0	8	21	64	1,580
YG-3001100	G9A68100	10.0	10	22	70	2,090
YG-3001120	G9A68120	12.0	12	25	76	2,860
YG-3001160	G9A68160	16.0	16	32	89	4,910
YG-3001200	G9A68200	20.0	20	38	102	7,700

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	from 3 to 6	from 6 to 10	from 10 to 18	from 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล K2 2 ฟัน ยาวพิเศษ

2 FLUTE, EXTRA LONG LENGTH

G9452 SERIES

PLAIN SHANK



Cutting Data ดูหน้า 81

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ 2 flute design for slotting.

- ◆ เหมาะสำหรับงานกัดแห้งที่อุณหภูมิสูง
- ◆ ประสิทธิภาพการทำงานดีเลิศ
- ◆ 2 ฟัน ออกแบบเพื่องานเดินร่อง



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3002903	G9452903	3	3	20	60	1,490
YG-3002904	G9452904	4	4	20	60	1,570
YG-3002905	G9452905	5	5	25	75	1,820
YG-3002906	G9452906	6	6	30	75	1,980
YG-3002908	G9452908	8	8	30	75	2,930
YG-3002910	G9452910	10	10	40	100	3,770
YG-3002912	G9452912	12	12	45	100	5,700
YG-3002914	G9452914	14	14	45	100	7,240
YG-3002916	G9452916	16	16	45	100	9,900
YG-3002918	G9452918	18	18	45	100	10,950
YG-3002920	G9452920	20	20	45	100	13,250

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	from 3 to 6	from 6 to 10	from 10 to 18	from 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล K2 4 ฟัน สั้น

4 FLUTE, SHORT LENGTH

G9A69 SERIES

PLAIN SHANK



Cutting Data ดูหน้า 82

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ 4 flute allows for better work piece finishes.



- ◆ เหมาะสำหรับงานกัดแห้งที่อุณหภูมิสูง
- ◆ ประสิทธิภาพการทำงานดีเลิศ
- ◆ 4 ฟัน ให้ผิวชิ้นงานเรียบ สวยยิ่งขึ้น

Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3003010	G9A69010	1.0	3	3	39	640
YG-3003015	G9A69015	1.5	3	5	39	600
YG-3003020	G9A69020	2.0	3	7	39	600
YG-3003025	G9A69025	2.5	3	7	39	600
YG-3003030	G9A69030	3.0	3	9	39	600
YG-3003040	G9A69040	4.0	4	14	51	750
YG-3003050	G9A69050	5.0	5	16	51	820
YG-3003060	G9A69060	6.0	6	19	64	1,020
YG-3003080	G9A69080	8.0	8	21	64	1,580
YG-3003100	G9A69100	10.0	10	22	70	2,090
YG-3003120	G9A69120	12.0	12	25	76	2,860
YG-3003160	G9A69160	16.0	16	32	89	4,910
YG-3003200	G9A69200	20.0	20	38	102	7,700

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	from 3 to 6	from 6 to 10	from 10 to 18	from 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล K2 4 ฟัน ยาวพิเศษ

4 FLUTE, EXTRA LONG LENGTH

G9453 SERIES

PLAIN SHANK



Cutting Data ดูหน้า 82

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ 4 flute allows for better work piece finishes.

- ◆ เหมาะสำหรับงานกัดแห้งที่อุณหภูมิสูง
- ◆ ประสิทธิภาพการทำงานดีเลิศ
- ◆ 4 ฟัน ให้ผิวชิ้นงานเรียบ สวยยิ่งขึ้น



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3004903	G9453903	3.0	3	20	60	1,490
YG-3004904	G9453904	4.0	4	20	60	1,570
YG-3004905	G9453905	5.0	5	25	75	1,820
YG-3004906	G9453906	6.0	6	30	75	1,980
YG-3004908	G9453908	8.0	8	30	75	2,930
YG-3004910	G9453910	10	10	40	100	3,770
YG-3004912	G9453912	12	12	45	100	5,700
YG-3004914	G9453914	14	14	45	100	7,240
YG-3004916	G9453916	16	16	45	100	9,900
YG-3004918	G9453918	18	18	45	100	10,950
YG-3004920	G9453920	20	20	45	100	13,250

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	from 3 to 6	from 6 to 10	from 10 to 18	from 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล K2 2 ฟัน หัวบอล สั้น

2 FLUTE, BALL NOSE, SHORT LENGTH

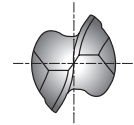
G9A70 SERIES

PLAIN SHANK



Cutting Data ดูหน้า 83

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ Designed for milling of radius bottom slots, fillets and special contours.



Unit : mm

รหัสสินค้า	EDP No.	R ±0.02	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3005010	G9A70010	R 0.5	1.0	3.0	3.0	39	740
YG-3005015	G9A70015	R 0.75	1.5	3.0	5.0	39	690
YG-3005020	G9A70020	R 0.1	2.0	3.0	7.0	39	690
YG-3005025	G9A70025	R 0.25	2.5	3.0	7.0	39	690
YG-3005030	G9A70030	R 1.5	3.0	3.0	9.0	39	690
YG-3005040	G9A70040	R 2.0	4.0	4.0	14	51	870
YG-3005050	G9A70050	R 2.5	5.0	5.0	16	51	940
YG-3005060	G9A70060	R 3.0	6.0	6.0	19	64	1,180
YG-3005080	G9A70080	R 4.0	8.0	8.0	21	64	1,830
YG-3005100	G9A70100	R 5.0	10	10	22	70	2,430
YG-3005110	G9A70110	R 5.5	11	11	25	70	•
YG-3005120	G9A70120	R 6.0	12	12	25	76	3,430
YG-3005160	G9A70160	R 8.0	16	16	32	89	7,060
YG-3005200	G9A70200	R 10.0	20	20	38	102	9,000

• Order

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 -0.030	h6

YG ดอกเอ็นมิล K2 2 ฟัน หัวบอล ยาว

2 FLUTE, BALL NOSE, LONG REACH

G9454 SERIES

PLAIN SHANK



Cutting Data ดูหน้า 83

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ Designed for milling of radius bottom slots, fillets and special contours.



Unit : mm

รหัสสินค้า	EDP No.	R ±0.02	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-3006030	G9454030	R 1.5	3.0	3	5	75	1,380
YG-3006040	G9454040	R 2.0	4.0	4	8	75	1,380
YG-3006050	G9454050	R 2.5	5.0	5	9	75	1,510
YG-3006060	G9454060	R 3.0	6.0	6	10	100	1,710
YG-3006080	G9454080	R 4.0	8.0	8	12	100	2,600
YG-3006100	G9454100	R 5.0	10.0	10	14	100	4,360
YG-3006120	G9454120	R 6.0	12.0	12	16	100	5,580
YG-3006140	G9454140	R 7.0	14.0	14	18	100	7,040
YG-3006160	G9454160	R 8.0	16.0	16	22	150	9,620
YG-3006200	G9454200	R 10.0	20.0	20	26	150	14,780

MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 -0.030	h6

YG ดอกเอ็นมิล K2 กัดหยาบ ยาว

MULTI FLUTE, COARSE PITCH ROUGHING, LONG LENGTH

G9A42 SERIES

FLAT SHANK



Cutting Data ดูหน้า 82

- ◆ Suitable for dry milling applications at high temperatures.
- ◆ Excellent high-performance end mills.
- ◆ Fast chip ejection.

- ◆ เหมาะสำหรับงานกัดแห้งที่อุณหภูมิสูง
- ◆ ประสิทธิภาพการทำงานดีเลิศ
- ◆ คลายเศษรวดเร็ว



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อัน / บาท
YG-3007060	G9A42060	6.0	6	16	57	3	1,900
YG-3007080	G9A42080	8.0	8	16	63	3	2,110
YG-3007100	G9A42100	10.0	10	22	72	4	3,390
YG-3007120	G9A42120	12.0	12	26	83	4	4,600
YG-3007140	G9A42140	14.0	14	26	83	4	5,630
YG-3007160	G9A42160	16.0	16	32	92	4	7,170
YG-3007180	G9A42180	18.0	18	32	92	4	9,560
YG-3007200	G9A42200	20.0	20	38	104	4	10,540
YG-3007250	G9A42250	25.0	25	45	121	5	•

• Order

Tolerances according to DIN 7160 & 7161

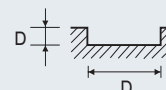
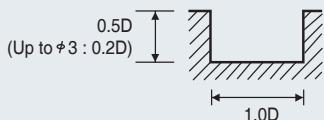
Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	from 3 to 6	from 6 to 10	from 10 to 18	from 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

2 FLUTE, FINISH, SLOTTING

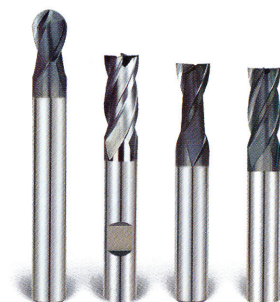
G9A68, G9452

MATERIAL	NON-ALLOYED STEELS, ALLOY STEELS, TOOL STEELS		ALLOY STEELS, HEAT RESISTANT STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~ HRC 30		HRC 30 - HRC 45									
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	14300	105	8500	65	7150	50	18700	205	44000	330	24700	200
1.5	9350	150	5550	85	5600	80	12100	205	27500	385	20300	300
2	7850	160	5150	100	4300	80	9350	220	22000	460	16500	340
3	6100	180	3800	120	3150	100	6050	220	15400	460	11000	340
4	5150	255	3150	155	2650	130	4600	220	11000	460	8800	340
5	4300	270	2550	160	2150	135	3650	220	9150	460	6800	340
6	3800	300	2300	190	1950	155	2950	255	7600	485	5700	375
8	2850	325	1700	170	1450	155	2200	275	5700	485	4400	375
10	2200	280	1350	135	1150	135	1850	285	4600	485	3400	375
12	1850	240	1150	110	950	110	1450	295	3750	485	2850	375
14	1700	215	1050	100	850	100	1300	310	3300	485	2400	375
16	1500	185	950	95	700	95	1100	320	2850	485	2200	375
20	1150	145	700	70	550	70	900	340	2200	485	1700	375



** The FEED, in long & extra long types, should be reduced by around 50%

RPM = rev./min. Feed = mm/min.

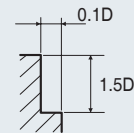
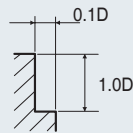


K-2 END MILLS

4 FLUTE, FINISH, SIDE CUTTING

G9A69, G9453

MATERIAL	NON-ALLOYED STEELS, ALLOY STEELS, TOOL STEELS		ALLOY STEELS, HEAT RESISTANT STEELS		STAINLESS STEELS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 45									
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	17600	150	10250	85	8650	75	18700	620	44000	1050	24700	605
1.5	11800	215	7050	115	7050	120	12100	620	27500	1160	20300	910
2	9850	240	6450	145	5350	120	9350	640	22000	1320	16500	1035
3	7600	270	4750	170	3950	145	6050	640	15400	1320	11000	1035
4	6450	485	3950	300	3300	240	4600	640	11000	1320	8800	1035
5	5350	510	3200	305	2700	255	3650	640	9150	1320	6800	1035
6	4750	560	2850	350	2400	280	2950	770	7600	1430	5700	1100
8	3550	605	2150	325	1800	300	2200	815	5700	1430	4400	1100
10	2750	520	1700	255	1450	255	1850	860	4600	1430	3400	1100
12	2350	440	1450	215	1150	205	1450	900	3750	1430	2850	1100
14	2100	395	1300	195	1050	190	1300	945	3300	1430	2400	1100
16	1850	350	1150	170	950	170	1100	970	2850	1430	2200	1100
20	1450	270	900	135	700	130	900	1035	2200	1430	1700	1100



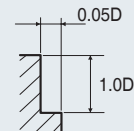
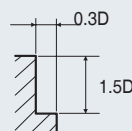
** The FEED, in long & extra long types, should be reduced by around 50%

RPM = rev./min. Feed = mm/min.

MULTI. FLUTE, ROUGHING, SIDE CUTTING

G9A42

MATERIAL	NON-ALLOYED STEELS, ALLOY STEELS, TOOL STEELS		ALLOY STEELS, HEAT RESISTANT STEELS		STAINLESS STEELS		INCONEL	
HARDNESS	~ HRC 30		HRC 30 ~ HRC 38		HRC 38 ~ HRC 45			
STRENGTH	~ 1000N/mm ²		1000 ~ 1200N/mm ²		1200 ~ 1400N/mm ²			
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	13250	1970	10550	710	7150	480	2050	160
8	9850	1970	7800	710	5350	480	1550	150
10	7800	1970	6450	710	4350	480	1100	160
12	6800	2040	5100	680	3550	480	1000	160
14	5800	2040	4400	710	3050	480	750	110
16	5100	2040	4100	650	2800	430	700	90
18	4400	1970	3750	610	2300	360	600	90
20	4100	1840	3050	480	2050	310	550	90
25	3650	1830	2700	530	1850	350	500	90



** The FEED, in long & extra long types, should be reduced by around 50%

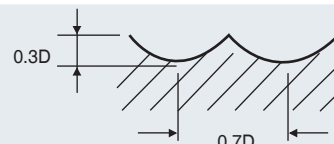
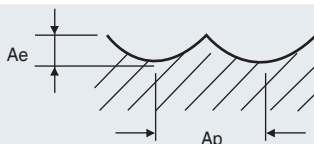
RPM = rev./min. Feed = mm/min.

2 FLUTE, BALL NOSE

G9A70, G9454

MATERIAL	CARBON STEELS, ALLOY STEELS, TOOL STEELS		CARBON STEELS, ALLOY STEELS, TOOL STEELS		HARDENED STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~ HRc 30		HRc 30 ~ HRc 45		HRc 45 ~ HRc 50					
STRENGTH	~ 1000N/mm ²		1000 ~ 1500N/mm ²		1500N/mm ² ~					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	12350	640	9150	415	4000	125	10500	220	30800	395
3	11400	575	8550	390	3800	125	7050	230	20500	395
4	8950	630	7150	450	3600	150	5150	285	15400	395
5	7800	700	6200	490	3100	150	4150	330	12100	470
6	7250	870	5900	705	2700	160	3400	360	10300	470
8	6100	1090	4900	785	2050	190	2500	460	7900	540
10	5450	1330	4350	870	1750	190	2050	460	6150	540
12	4990	1500	3950	950	1500	210	1750	460	5150	630
14	4530	1495	3600	925	1300	210	1400	460	4300	630
16	4085	1470	3200	905	1150	210	1300	460	3850	540
18	3800	1425	3000	890	1050	210	1100	460	3400	540
20	3550	1425	2800	885	950	210	1050	420	2950	540

Ae : D1~D6=0.2mm
D8~D20=0.3mm
Ap : 0.2D





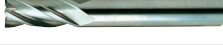



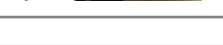

** The FEED, in long & extra long types, should be reduced by around 50%

RPM = rev./min. Feed = mm/min.

CARBIDE END MILLS



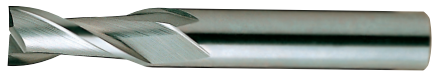
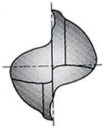
CARBIDE END MILLS SELECTION GUIDE

	E5401	ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน 2 FLUTE, STANDARD END MILLS	P. 86
	EH401	ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน ชูบ TiAlN 2 FLUTE, STANDARD END MILLS, TiAlN	P. 87
	E5402	ดอกเอ็นมิล คาร์ไบด์ 4 ฟัน 4 FLUTE, STANDARD END MILLS	P. 88
	EH402	ดอกเอ็นมิล คาร์ไบด์ 4 ฟัน ชูบ TiAlN 4 FLUTE, STANDARD END MILLS, TiAlN	P. 89
	E5414	ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน หัวบอล 2 FLUTE, BALL END MILLS	P. 90
	EH414	ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน หัวบอล ชูบ TiAlN 2 FLUTE, BALL END MILLS, TiAlN	P. 91
	EH553	ดอกเอ็นมิล คาร์ไบด์ 3 ฟัน ชูบ TiAlN 3 FLUTE, STANDARD END MILLS, TiAlN	P. 92
	EH742	ดอกเอ็นมิล คาร์ไบด์ 3 ฟัน กัดหยาบ ชูบ TiAlN 3 FLUTE, ROUGHING END MILLS, TiAlN	P. 93
SPEED & FEED DATA			P. 94

Carbide Material Selection

	Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
				~40 HRc	~50 HRc	~60 HRc	60 HRc~						
Uncoated	○	○	○	○				○	○	○	○	○	
TiAlN	◎	◎	◎	◎	○			◎	◎	◎	◎	◎	

YG ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน



SERIES E5401
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบด์แบบอนุภาคละเอียด (Micro Grain) การตัดงานการสึกหรอสูง



Cutting Data ดูหน้า 94

Unit : mm

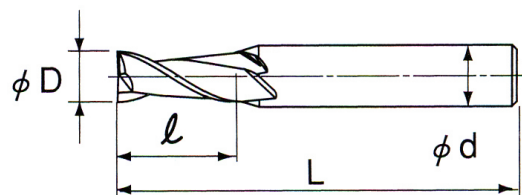
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2601004	E5401004	*0.4	3	1	38	570
YG-2601005	E5401005	*0.5	3	1.5	38	570
YG-2601006	E5401006	*0.6	3	1.5	38	550
YG-2601007	E5401007	*0.7	3	1.5	38	520
YG-2601008	E5401008	*0.8	3	2	38	500
YG-2601009	E5401009	*0.9	3	2	38	500
YG-2601010	E5401010	1.0	4	3	40	•
YG-2601910	E5401910	1.0	6	3	40	970
YG-2601014	E5401014	1.4	4	5	40	•
YG-2601015	E5401015	1.5	4	5	40	•
YG-2601915	E5401915	1.5	6	5	40	890
YG-2601020	E5401020	2.0	4	6	40	•
YG-2601920	E5401920	2.0	6	6	40	860
YG-2601025	E5401025	2.5	4	8	40	•
YG-2601925	E5401925	2.5	6	8	40	•
YG-2601030	E5401030	3.0	6	8	45	860
YG-2601035	E5401035	3.5	6	10	45	•
YG-2601040	E5401040	4.0	6	11	45	860
YG-2601045	E5401045	4.5	6	11	45	•
YG-2601050	E5401050	5.0	6	13	50	860
YG-2601055	E5401055	5.5	6	13	50	•
YG-2601060	E5401060	6.0	6	13	50	860
YG-2601065	E5401065	6.5	8	16	60	•
YG-2601070	E5401070	7.0	8	16	60	1,370
YG-2601080	E5401080	8.0	8	19	60	1,370
YG-2601090	E5401090	9.0	10	19	70	2,340
YG-2601100	E5401100	10.0	10	22	70	2,340
YG-2601110	E5401110	11.0	12	22	75	3,090
YG-2601120	E5401120	12.0	12	26	75	3,090
YG-2601140	E5401140	14.0	14	26	75	3,800
YG-2601160	E5401160	16.0	16	25	75	4,500
YG-2601180	E5401180	18.0	18	32	100	•
YG-2601200	E5401200	20.0	20	32	100	9,400

• Order

Tolerances according to DIN 7160 & 7161

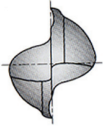
Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



* MARKED ITEMS : MILL DIA. TOLERANCE -0.014 ~ -0.028

YG ดอกเอ็นมิล कार्ไบด์ 2 ฟัน TiAlN



SERIES EH401
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบด์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 94

MG

FLUTE
2

TiAlN



Unit : mm

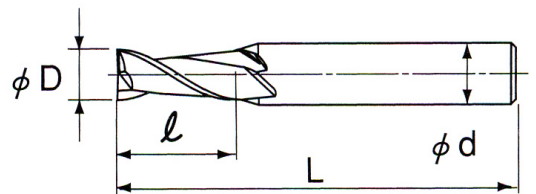
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2602004	EH401004	*0.4	3	1	38	•
YG-2602005	EH401005	*0.5	3	1.5	38	•
YG-2602006	EH401006	*0.6	3	1.5	38	•
YG-2602007	EH401007	*0.7	3	1.5	38	•
YG-2602008	EH401008	*0.8	3	2	38	•
YG-2602009	EH401009	*0.9	3	2	38	•
YG-2602010	EH401010	1.0	4	3	40	•
YG-2602910	EH401910	1.0	6	3	40	1,370
YG-2602014	EH401014	1.4	4	5	40	•
YG-2602015	EH401015	1.5	4	5	40	•
YG-2602915	EH401915	1.5	6	5	40	1,280
YG-2602020	EH401020	2.0	4	6	40	•
YG-2602920	EH401920	2.0	6	6	40	1,250
YG-2602025	EH401025	2.5	4	8	40	•
YG-2602925	EH401925	2.5	6	8	40	•
YG-2602030	EH401030	3.0	6	8	45	1,250
YG-2602035	EH401035	3.5	6	10	45	•
YG-2602040	EH401040	4.0	6	11	45	1,250
YG-2602045	EH401045	4.5	6	11	45	•
YG-2602050	EH401050	5.0	6	13	50	1,250
YG-2602055	EH401055	5.5	6	13	50	•
YG-2602060	EH401060	6.0	6	13	50	1,250
YG-2602065	EH401065	6.5	8	16	60	•
YG-2602070	EH401070	7.0	8	16	60	2,040
YG-2602080	EH401080	8.0	8	19	60	2,040
YG-2602090	EH401090	9.0	10	19	70	3,120
YG-2602100	EH401100	10.0	10	22	70	3,120
YG-2602110	EH401110	11.0	12	22	75	3,950
YG-2602120	EH401120	12.0	12	26	75	3,950
YG-2602140	EH401140	14.0	14	26	75	4,700
YG-2602160	EH401160	16.0	16	25	75	5,500
YG-2602180	EH401180	18.0	18	32	100	•
YG-2602200	EH401200	20.0	20	32	100	11,500

• Order

Tolerances according to DIN 7160 & 7161

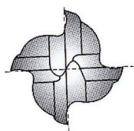
Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



* MARKED ITEMS : MILL DIA. TOLERANCE -0.014 ~ -0.028

YG ดอกเอ็นมิล कारไบต์ 4 ฟัน



SERIES E5402
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบต์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 94



Unit : mm

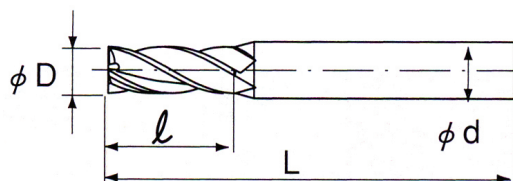
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2603015	E5402015	1.5	4	5	40	860
YG-2603920	E5402920	2.0	6	6	40	860
YG-2603025	E5402025	2.5	4	8	40	860
YG-2603030	E5402030	3.0	6	8	45	860
YG-2603035	E5402035	3.5	6	10	45	860
YG-2603040	E5402040	4.0	6	11	45	860
YG-2603045	E5402045	4.5	6	11	45	860
YG-2603050	E5402050	5.0	6	13	50	860
YG-2603055	E5402055	5.5	6	13	50	860
YG-2603060	E5402060	6.0	6	13	50	860
YG-2603070	E5402070	7.0	8	16	60	1,370
YG-2603080	E5402080	8.0	8	19	60	1,370
YG-2603090	E5402090	9.0	10	19	70	2,340
YG-2603100	E5402100	10.0	10	22	70	2,340
YG-2603110	E5402110	11.0	12	22	75	3,090
YG-2603120	E5402120	12.0	12	26	75	3,090
YG-2603140	E5402140	14.0	14	26	75	3,800
YG-2603160	E5402160	16.0	16	25	75	4,500
YG-2603180	E5402180	18.0	18	32	100	•
YG-2603200	E5402200	20.0	20	32	100	9,400

• Order

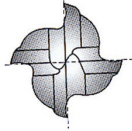
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



YG ดอกเอ็นมิล कारไบต์ 4 ฟัน TiAlN



SERIES EH402
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบต์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data คู่มือหน้า 94

MG

FLUTE
4

TiAlN

30°

PLAIN



Unit : mm

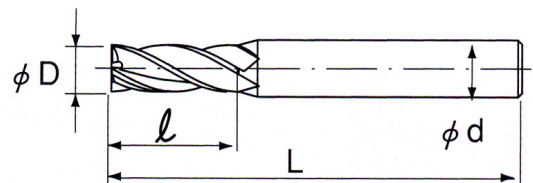
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2604015	EH402015	1.5	4	5	40	1,250
YG-2604920	EH402920	2.0	6	6	40	1,250
YG-2604025	EH402025	2.5	4	8	40	1,250
YG-2604030	EH402030	3.0	6	8	45	1,250
YG-2604035	EH402035	3.5	6	10	45	1,250
YG-2604040	EH402040	4.0	6	11	45	1,250
YG-2604045	EH402045	4.5	6	11	45	1,250
YG-2604050	EH402050	5.0	6	13	50	1,250
YG-2604055	EH402055	5.5	6	13	50	1,250
YG-2604060	EH402060	6.0	6	13	50	1,250
YG-2604070	EH402070	7.0	8	16	60	2,050
YG-2604080	EH402080	8.0	8	19	60	2,050
YG-2604090	EH402090	9.0	10	19	70	3,120
YG-2604100	EH402100	10.0	10	22	70	3,120
YG-2604110	EH402110	11.0	12	22	75	3,950
YG-2604120	EH402120	12.0	12	26	75	3,950
YG-2604140	EH402140	14.0	14	26	75	4,700
YG-2604160	EH402160	16.0	16	25	75	5,500
YG-2604180	EH402180	18.0	18	32	100	•
YG-2604200	EH402200	20.0	20	32	100	11,500

• Order

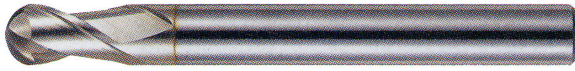
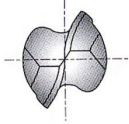
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



YG ดอกเอ็นมิล คาร์ไบด์ 2 ฟัน หัวบอล



SERIES E5414
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบด์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 95



Unit : mm

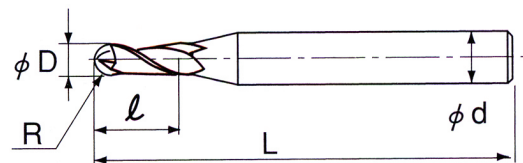
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2605004	E5414004	*0.4	3	0.8	50	1,200
YG-2605006	E5414006	*0.6	3	1.2	50	880
YG-2605008	E5414008	*0.8	3	1.6	50	750
YG-2605901	E5414901	1.0	6	3	50	1,610
YG-2605902	E5414902	2.0	6	6	50	1,410
YG-2605030	E5414030	3.0	6	8	60	1,260
YG-2605040	E5414040	4.0	6	11	70	1,290
YG-2605050	E5414050	5.0	6	13	80	1,330
YG-2605060	E5414060	6.0	6	13	80	1,330
YG-2605070	E5414070	7.0	8	16	90	1,960
YG-2605080	E5414080	8.0	8	19	90	1,960
YG-2605090	E5414090	9.0	10	19	100	3,090
YG-2605100	E5414100	10.0	10	22	100	3,090
YG-2605120	E5414120	12.0	12	26	110	4,220
YG-2605140	E5414140	14.0	14	26	120	6,300
YG-2605160	E5414160	16.0	16	30	120	7,400
YG-2605200	E5414200	20.0	20	38	130	13,200
YG-2605250	E5414250	25.0	25	50	150	•

• Order

Tolerances according to DIN 7160 & 7161

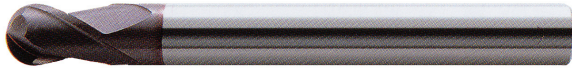
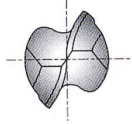
Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



* MARKED ITEMS : MILL DIA. TOLERANCE -0.014 ~ -0.028

YG ดอกเอ็นมิล कारไบต์ 2 ฟัน หัวบอล TiAlN



SERIES EH414
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบต์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 95



Unit : mm

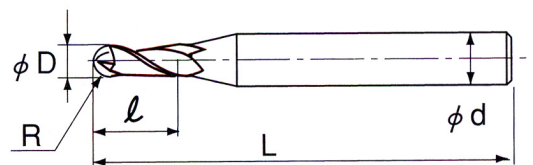
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2606004	EH414004	*0.4	3	0.8	50	•
YG-2606006	EH414006	*0.6	3	1.2	50	•
YG-2606008	EH414008	*0.8	3	1.6	50	•
YG-2606901	EH414901	1.0	6	3	50	2,020
YG-2606902	EH414902	2.0	6	6	50	1,850
YG-2606030	EH414030	3.0	6	8	60	1,690
YG-2606040	EH414040	4.0	6	11	70	1,690
YG-2606050	EH414050	5.0	6	13	80	1,770
YG-2606060	EH414060	6.0	6	13	80	1,770
YG-2606070	EH414070	7.0	8	16	90	2,740
YG-2606080	EH414080	8.0	8	19	90	2,740
YG-2606090	EH414090	9.0	10	19	100	3,950
YG-2606100	EH414100	10.0	10	22	100	3,950
YG-2606120	EH414120	12.0	12	26	110	5,230
YG-2606140	EH414140	14.0	14	26	120	7,500
YG-2606160	EH414160	16.0	16	30	120	8,700
YG-2606200	EH414200	20.0	20	38	130	15,600
YG-2606250	EH414250	25.0	25	50	150	•

• Order

Tolerances according to DIN 7160 & 7161

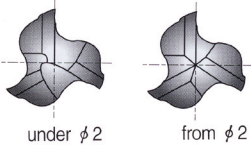
Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



* MARKED ITEMS : MILL DIA. TOLERANCE -0.014 ~ -0.028

YG ดอกเอ็นมิล คาร์ไบด์ 3 ฟัน TiAlN



SERIES EH553
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for cutting hardened & high alloy steels, steel casting, chill casting, malleable cast iron, CrNi-steels, brass, copper, aluminum with a high percentage of silicon and abrasive plastics.

คาร์ไบด์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 95

MG

FLUTE
3

TiAlN



Unit : mm

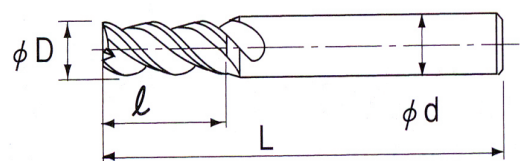
รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อื่น / บาท
YG-2607005	EH553005	0.5	3	1.5	38	•
YG-2607006	EH553006	0.6	3	1.5	38	•
YG-2607008	EH553008	0.8	3	2	38	920
YG-2607010	EH553010	1.0	3	2	38	850
YG-2607012	EH553012	1.2	3	2	38	1,060
YG-2607015	EH553015	1.5	3	2	38	850
YG-2607018	EH553018	1.8	3	2	38	1,060
YG-2607020	EH553020	2.0	6	4	35	990
YG-2607025	EH553025	2.5	6	5	36	1,060
YG-2607030	EH553030	3.0	6	5	36	990
YG-2607035	EH553035	3.5	6	6	37	1,060
YG-2607040	EH553040	4.0	6	7	38	990
YG-2607045	EH553045	4.5	6	8	38	1,060
YG-2607050	EH553050	5.0	6	8	39	990
YG-2607055	EH553055	5.5	6	8	39	1,060
YG-2607957	EH553957	5.75	6	8	39	1,060
YG-2607060	EH553060	6.0	6	8	39	1,060
YG-2607967	EH553967	6.75	8	10	42	1,450
YG-2607070	EH553070	7.0	8	10	42	1,360
YG-2607977	EH553977	7.75	8	10	42	1,440
YG-2607080	EH553080	8.0	8	11	43	1,440
YG-2607087	EH553087	8.7	10	11	48	2,100
YG-2607090	EH553090	9.0	10	11	48	1,960
YG-2607097	EH553097	9.7	10	11	48	2,100
YG-2607100	EH553100	10.0	10	13	50	2,040
YG-2607120	EH553120	12.0	12	15	55	2,370
YG-2607140	EH553140	14.0	14	15	58	3,300
YG-2607160	EH553160	16.0	16	18	62	3,900
YG-2607180	EH553180	18.0	18	20	70	4,800
YG-2607200	EH553200	20.0	20	22	75	6,300

• Order

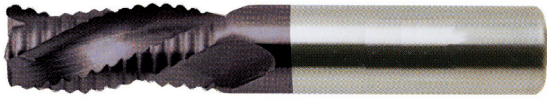
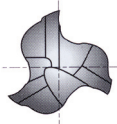
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



YG ดอกเอ็นมิล कारไบต์ 3 ฟัน กัดหยาบ TiAlN



SERIES EH742
PLAIN SHANK

This Ultra-grain carbide grade has excellent wear resistance as well as great toughness and rigidity which is as same as normal carbide. Designed for machining in aluminum and other non-ferrous materials.

Superior chip removal.

คาร์ไบต์แบบอนุภาคละเอียด (Micro Grain) การต้านทานการสึกหรอสูง

Cutting Data ดูหน้า 96



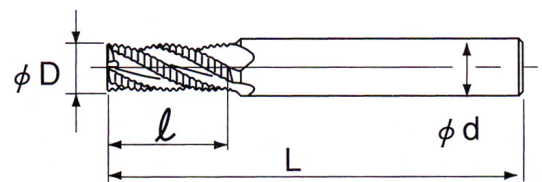
Unit : mm

รหัสสินค้า	EDP No.	D e8	d h6	ℓ	L	อัน / บาท
YG-2608060	EH742060	6.0	6	16	57	2,120
YG-2608070	EH742070	7.0	8	16	63	2,460
YG-2608080	EH742080	8.0	8	16	63	2,460
YG-2608090	EH742090	9.0	10	19	72	3,670
YG-2608100	EH742100	10.0	10	22	72	3,670
YG-2608120	EH742120	12.0	12	26	83	4,750
YG-2608140	EH742140	14.0	14	26	83	5,750
YG-2608160	EH742160	16.0	16	32	92	7,750
YG-2608180	EH742180	18.0	18	32	92	9,950
YG-2608200	EH742200	20.0	20	38	104	12,400
YG-2608250	EH742250	25.0	25	45	121	22,200

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

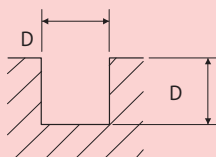
$\mu\text{m} = 1/1000\text{mm}$



2FL. FINISH Slotting

E5401 & EH401

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~800N/mm ²		800 ~1000N/mm ²		1000 ~1300N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	80	4800	70	4000	55	8000	65	6500	150	16000	320	12000	240
3	3700	90	3200	80	2600	60	5300	65	4200	150	11000	320	8000	240
4	2800	90	2400	80	2000	60	4000	65	3200	150	8000	320	6000	240
5	2200	90	1900	80	1600	60	3200	65	2500	150	6400	320	4800	240
6	1800	90	1600	80	1300	60	2600	65	2100	180	5300	340	4000	260
8	1400	90	1200	80	1000	60	2000	65	1600	190	4000	340	3000	260
10	1100	90	950	80	800	60	1600	65	1300	200	3200	340	2400	260
12	900	90	800	80	660	60	1300	65	1000	210	2600	340	2000	260
14	800	90	700	80	570	60	1100	65	900	220	2300	340	1700	260
16	700	100	600	85	500	75	1000	75	800	225	2000	340	1500	260
20	550	100	480	85	400	75	800	80	640	240	1600	340	1200	260

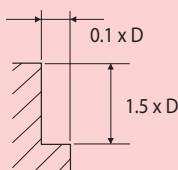


RPM=rev/min. Feed=mm/min

4FL. FINISH Side Cutting

E5402 & EH402

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~800N/mm ²		800 ~1000N/mm ²		1000 ~1300N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	240	4800	210	4000	160	8000	200	6500	450	16000	960	12000	720
3	3700	270	3200	240	2600	180	5300	200	4200	450	11000	960	8000	720
4	2800	270	2400	240	2000	180	4000	200	3200	450	8000	960	6000	720
5	2200	270	1900	240	1600	180	3200	200	2500	450	6400	960	4800	720
6	1800	270	1600	240	1300	180	2600	200	2100	540	5300	1020	4000	780
8	1400	270	1200	240	1000	180	2000	200	1600	570	4000	1020	3000	780
10	1100	270	950	240	800	180	1600	200	1300	600	3200	1020	2400	780
12	900	270	800	240	660	180	1300	200	1000	630	2600	1020	2000	780
14	800	270	700	240	570	180	1100	200	900	660	2300	1020	1700	780
16	700	300	600	260	500	220	1000	225	800	680	2000	1020	1500	780
20	550	300	480	260	400	220	800	240	640	720	1600	1020	1200	780

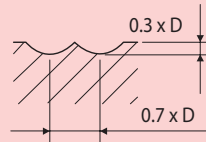


RPM=rev/min. Feed=mm/min

2FL. BALL NOSE

E5414 & EH414

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CAST IRON		ALUMINUM ALLOYS	
HARDNESS	~HRc30		HRc30~HRc40					
STRENGTH	~1000N/mm ²		1000 ~1300N/mm ²					
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
R 1.0 x 2.0	5200	90	4400	45	7300	150	21500	280
R 1.5 x 3.0	3500	100	2900	45	4900	160	14300	280
R 2.0 x 4.0	2600	100	2100	45	3600	200	10900	280
R 2.5 x 5.0	2100	105	1700	45	2900	230	8800	330
R 3.0 x 6.0	1700	100	1430	45	2400	250	7260	330
R 4.0 x 8.0	1270	95	1100	45	1800	320	5500	380
R 5.0 x 10.0	1000	95	870	45	1430	320	4300	380
R 6.0 x 12.0	870	85	730	45	1200	320	3600	440
R 7.0 x 14.0	750	85	620	45	1000	325	3000	440
R 8.0 x 16.0	650	85	540	45	920	325	2700	380
R 9.0 x 18.0	580	85	480	45	810	325	2400	380
R 10.0 x 20.0	500	85	430	45	730	290	2100	380

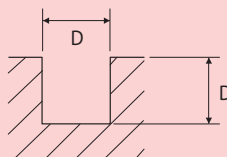


RPM=rev/min. Feed=mm/min

3FL. FINISH Slotting

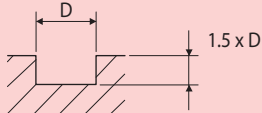
EH553

MATERIAL	CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		CARBON STEELS ALLOY STEELS TOOL STEELS		STAINLESS STEELS TITANIUM ALLOYS		CAST IRON		ALUMINUM ALLOYS		COPPER, BRASS NON-FERROUS METALS	
HARDNESS	~HRc20		HRc20~HRc30		HRc30~HRc40									
STRENGTH	500 ~800N/mm ²		800 ~1000N/mm ²		1000 ~1300N/mm ²									
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	5500	70	4800	60	4000	50	8000	55	6500	140	16000	290	12000	220
3	3700	80	3200	75	2600	55	5300	55	4200	140	11000	300	8000	220
4	2800	80	2400	75	2000	55	4000	55	3200	130	8000	290	6000	220
5	2200	80	1900	70	1600	55	3200	55	2500	135	6400	290	4800	220
6	1800	80	1600	70	1300	55	2600	60	2100	160	5300	305	4000	240
8	1400	80	1200	70	1000	55	2000	60	1600	170	4000	310	3000	230
10	1100	80	950	70	800	55	1600	60	1300	180	3200	305	2400	230
12	900	80	800	70	660	55	1300	60	1000	190	2600	300	2000	230
14	800	80	700	70	570	55	1100	60	900	200	2300	300	1700	230
16	700	90	600	75	500	65	1000	70	800	200	2000	300	1500	230
20	550	90	480	75	400	65	800	70	640	215	1600	300	1200	230



RPM=rev/min. Feed=mm/min

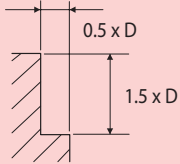
MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	10500	800
8	8000	700
10	6500	750
12	5250	800
16	4000	800
20	3200	800



<SLOTING>

RPM=rev/min
Feed=mm/min

MATERIAL	ALUMINUM NON-FERROUS METALS	
DIAMETER	RPM	FEED
6	10500	800
8	8000	700
10	6500	750
12	5250	800
16	4000	800
20	3200	800



<SIDE CUTTING>

RPM=rev/min
Feed=mm/min


















X-POWER

HIGH SPEED CUTTING
DRY CUTTING
FOR HIGH HARDENED
STEEL UPTO HRc70



X-POWER END MILLS

SELECTION GUIDE

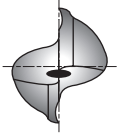
	EM810	ดอกเอ็นมิล X-POWER 2 ฟัน สั้น 2 FLUTE, SHORT LENGTH	P. 100
	EM816	ดอกเอ็นมิล X-POWER 2 ฟัน ยาว 2 FLUTE, LONG LENGTH	P. 102
	EM895	ดอกเอ็นมิล X-POWER 3 ฟัน สั้น 3 FLUTE, SHORT LENGTH	P. 103
	EM811	ดอกเอ็นมิล X-POWER 4 ฟัน สั้น 4 FLUTE, SHORT LENGTH	P. 104
	EM817	ดอกเอ็นมิล X-POWER 4 ฟัน ยาว 4 FLUTE, LONG LENGTH	P. 105
	EM812	ดอกเอ็นมิล X-POWER 6&8 ฟัน ยาว 6,8 FLUTE, 45° HELIX, LONG LENGTH	P.106
	EM834	ดอกเอ็นมิล X-POWER 6 ฟัน ยาวพิเศษ 6FLUTE, 45° HELIX, EXTRA LONG LENGTH	P.107
	EM876	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน สั้น 2 FLUTE, BALL NOSE, SHORT LENGTH	P.108
	EM813	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน ยาว 2 FLUTE, BALL NOSE, LONG LENGTH	P.109
	EM899	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน ตัวกลาง มีคอ 2 FLUTE, MEDIUM LENGTH, BALL NOSE WITH NECK	P.110
	EM838	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุนคอยาว 2 FLUTE, BALL NOSE, LONG REACH	P.111
	EM902	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุนตัวเตเปอร์ 2 FLUTE, BALL NOSE, WITH TAPER NECK	P.112
	EM878	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุน High Precision มีคอ 2 FLUTE, STUB CUT LENGTH, HIGH PRECISION BALL NOSE WITH NECK	P.113
	EM865	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน แบบมินิ 2 FLUTE, MINIATURE, BALL NOSE	P.114
	EM815	ดอกเอ็นมิล X-POWER หัวบอล 4 ฟัน ยาว 4 FLUTE, BALL NOSE, LONG LENGTH	P.115
	EM832	ดอกเอ็นมิล X-POWER กัดหยาบ สั้น MULTI. FLUTE, ROUGHING, SHORT LENGTH	P.116
	EM814	ดอกเอ็นมิล X-POWER กัดหยาบ ยาว MULTI. FLUTE, ROUGHING, LONG LENGTH	P.117

	EM833	ดอกเอ็นมิล X-POWER หัวบอล กัดหยาบ ยาว 3,4 FLUTE, ROUGHING BALL NOSE, LONG LENGTH	P.118
	EM818	ดอกเอ็นมิล X-POWER 2 ฟัน มุม R ยาว 2 FLUTE, CORNER RADIUS, LONG LENGTH	P.119
	EM819	ดอกเอ็นมิล X-POWER 4 ฟัน มุม R ยาว 4 FLUTE, CORNER RADIUS, LONG LENGTH	P.120
	EM897	ดอกเอ็นมิล X-POWER 6 ฟัน แบบ STUB มีคอ มุม R 6 FLUTE, STUB CUT LENGTH, CORNER RADIUS WITH NECK	P.121
	EM835	ดอกเอ็นมิล X-POWER 6 ฟัน มุม R ยาว 6 FLUTE, CORNER RADIUS, LONG LENGTH	P.122
	EM839	ดอกเอ็นมิล X-POWER 4 ฟัน แบบ STUB มีคอ มุม R 4 FLUTE, STUB CUT LENGTH, CORNER RADIUS WITH NECK	P.123
	EM836	ดอกเอ็นมิล X-POWER 3 ฟัน แบบมินิ ตัวสั้น 3 FLUTE, MINIATURE, SHORT LENGTH	P.124
	EM837	ดอกเอ็นมิล X-POWER 2 ฟัน เตเปอร์ สั้น 2 FLUTE, TAPER, SHORT LENGTH	P.125
	EM883	ดอกเอ็นมิล X-POWER 2 ฟัน กัดร่องเล็ก 2 FLUTE, END MILLS for RIB PROCESSING	P.126
	EM886	ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน กัดร่องเล็ก 2 FLUTE, BALL NOSE for RIB PROCESSING	P.127
	EM889	ดอกเอ็นมิล X-POWER 4 ฟัน ตัวเตเปอร์ แบบยาว 4 FLUTE, TAPER for RIB PROCESSING	P.128
	EM890	ดอกเอ็นมิล X-POWER หัวบอล 4 ฟัน ตัวเตเปอร์ ยาวพิเศษ 4 FLUTE, TAPER BALL NOSE for RIB PROCESSING	P.130
SPEED & FEED DATA			P.132

X-POWER Material Selection

Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
			~40 HRc	~50 HRc	~60 HRc	60 HRc~						
◎	◎	◎	◎	◎	◎		◎	○	○	○	◎	○

YG ดอกเอ็นมิล X-POWER 2 ฟัน สั้น



SERIES EM810
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Superior workpiece finishes.
- Increased feed rates.

Cutting Data ดูหน้า 132



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4001004	EM810004	*0.4	3	0.8	40	1,780
YG-4001005	EM810005	*0.5	3	1	40	1,560
YG-4001006	EM810006	*0.6	3	1.2	40	1,460
YG-4001007	EM810007	*0.7	3	1.4	40	1,420
YG-4001008	EM810008	*0.8	3	1.6	40	1,320
YG-4001009	EM810009	*0.9	3	2.0	40	1,320
YG-4001010	EM810010	1.0	4	2.5	40	1,270
YG-4001901	EM810901	1.0	6	2.5	40	1,830
YG-4001011	EM810011	1.1	4	2.5	40	1,270
YG-4001012	EM810012	1.2	4	4	40	1,270
YG-4001013	EM810013	1.3	4	4	40	1,270
YG-4001014	EM810014	1.4	4	4	40	1,270
YG-4001015	EM810015	1.5	4	4	40	1,270
YG-4001902	EM810902	1.5	6	4	40	1,830
YG-4001020	EM810020	2.0	4	6	40	1,150
YG-4001903	EM810903	2.0	6	6	40	1,660
YG-4001025	EM810025	2.5	4	8	40	1,150
YG-4001904	EM810904	2.5	6	8	40	1,660
YG-4001030	EM810030	3.0	6	8	45	1,660
YG-4001035	EM810035	3.5	6	10	45	1,660
YG-4001040	EM810040	4.0	6	11	45	1,660
YG-4001045	EM810045	4.5	6	11	45	1,660
YG-4001050	EM810050	5.0	6	13	50	1,660
YG-4001055	EM810055	5.5	6	13	50	1,660
YG-4001060	EM810060	6.0	6	13	50	1,660
YG-4001065	EM810065	6.5	8	16	60	2,130
YG-4001070	EM810070	7.0	8	16	60	2,130
YG-4001075	EM810075	7.5	8	16	60	2,130
YG-4001080	EM810080	8.0	8	19	60	2,130
YG-4001085	EM810085	8.5	10	19	70	3,150
YG-4001090	EM810090	9.0	10	19	70	3,150
YG-4001095	EM810095	9.5	10	19	70	3,150

* EM810004~EM810015 MINIATURE CUTTING CONDITION SEE PAGE 142.

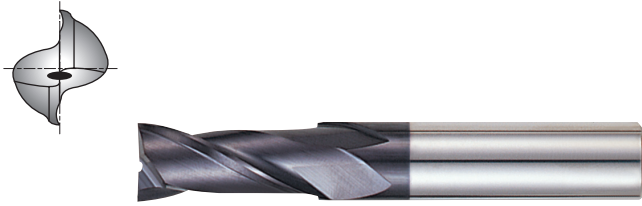
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

* MARKED ITEMS : MILL DIA. TOLERANCE 0~-0.012

YG ดอกเอ็นมิล X-POWER 2 ฟัน สีน



SERIES EM810
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Superior workpiece finishes.
- Increased feed rates.

Cutting Data ดูหน้า 132



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4001100	EM810100	10.0	10	22	70	3,150
YG-4001105	EM810105	10.5	12	22	75	4,320
YG-4001110	EM810110	11.0	12	22	75	4,320
YG-4001115	EM810115	11.5	12	22	75	4,320
YG-4001120	EM810120	12.0	12	26	75	4,320
YG-4001906	EM810906	13.0	12	26	85	5,480
YG-4001905	EM810905	14.0	16	26	85	7,200
YG-4001140	EM810140	14.0	14	26	85	5,480
YG-4001908	EM810908	15.0	16	26	90	7,200
YG-4001160	EM810160	16.0	16	32	100	7,200
YG-4001909	EM810909	17.0	16	32	100	9,550
YG-4001180	EM810180	18.0	18	32	100	9,550
YG-4001911	EM810911	19.0	20	32	100	11,900
YG-4001200	EM810200	20.0	20	38	105	11,900
YG-4001220	EM810220	22.0	20	38	105	15,500
YG-4001240	EM810240	24.0	25	45	120	19,000
YG-4001250	EM810250	25.0	25	45	120	19,000

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 2 ฟัน ยาว



SERIES EM816
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Superior workpiece finishes.
- Increased feed rates.

Cutting Data ดูหน้า 132



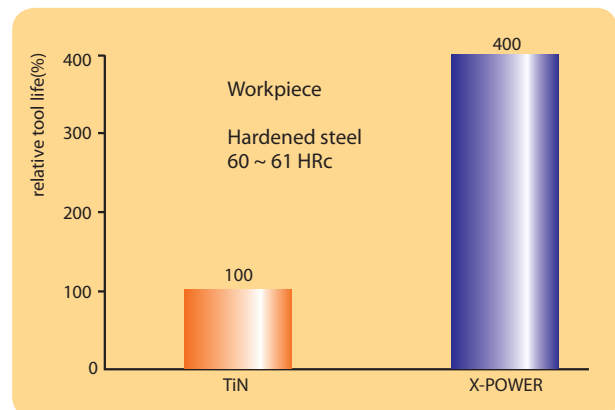
Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4002020	EM816020	2.0	4	8	40	1,380
YG-4002030	EM816030	3.0	6	12	50	1,990
YG-4002040	EM816040	4.0	6	15	50	1,990
YG-4002050	EM816050	5.0	6	20	60	1,990
YG-4002060	EM816060	6.0	6	20	60	1,990
YG-4002080	EM816080	8.0	8	25	70	2,560
YG-4002100	EM816100	10.0	10	30	90	3,780
YG-4002120	EM816120	12.0	12	30	90	5,190
YG-4002140	EM816140	14.0	16	40	110	7,400
YG-4002160	EM816160	16.0	16	50	110	9,670
YG-4002180	EM816180	18.0	20	50	110	13,150
YG-4002200	EM816200	20.0	20	55	110	16,100
YG-4002250	EM816250	25.0	25	75	140	25,650

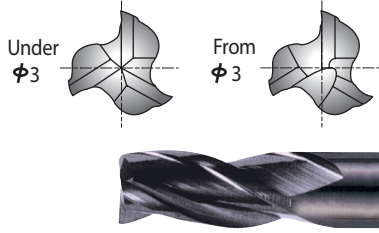
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



YG ดอกเอ็นมิล X-POWER 3 ฟัน สั้น



SERIES EM895
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Possesses the advantage of 2 flute and 4 flute end mill.
- Superior workpiece finishes.

Cutting Data ดูหน้า 133



Unit : mm

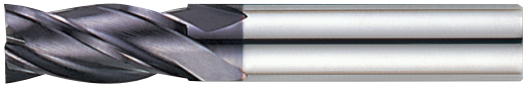
รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4003010	EM895010	1.0	3	2.5	38	1,370
YG-4003015	EM895015	1.5	4	5	50	1,370
YG-4003025	EM895025	2.5	3	7	38	1,150
YG-4003030	EM895030	3.0	3	10	38	1,150
YG-4003901	EM895901	3.0	6	10	50	1,820
YG-4003035	EM895035	3.5	4	12	50	1,280
YG-4003902	EM895902	3.5	6	12	50	1,820
YG-4003040	EM895040	4.0	4	12	50	1,280
YG-4003903	EM895903	4.0	6	12	50	1,820
YG-4003045	EM895045	4.5	6	14	57	1,820
YG-4003050	EM895050	5.0	5	14	50	1,700
YG-4003904	EM895904	5.0	6	14	57	1,820
YG-4003060	EM895060	6.0	6	16	57	1,820
YG-4003070	EM895070	7.0	7	20	60	2,240
YG-4003080	EM895080	8.0	8	20	63	2,240
YG-4003100	EM895100	10.0	10	22	72	3,240
YG-4003120	EM895120	12.0	12	25	73	4,450
YG-4003140	EM895140	14.0	14	25	75	5,400
YG-4003160	EM895160	16.0	16	32	82	7,140
YG-4003180	EM895180	18.0	18	32	92	9,600
YG-4003200	EM895200	20.0	20	38	92	11,900

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 4 ฟัน สั้น



SERIES EM811
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- 4 flute allows for better workpiece finishes.
- Increased production.

Cutting Data ดูหน้า 134

MG

FLUTE
4

30°

PLAIN



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4004020	EM811020	2.0	4	6	40	1,150
YG-4004901	EM811901	2.0	6	6	40	1,670
YG-4004025	EM811025	2.5	4	8	40	1,150
YG-4004902	EM811902	2.5	6	8	40	1,670
YG-4004030	EM811030	3.0	6	8	45	1,660
YG-4004035	EM811035	3.5	6	10	45	1,660
YG-4004040	EM811040	4.0	6	11	45	1,660
YG-4004045	EM811045	4.5	6	11	45	1,660
YG-4004050	EM811050	5.0	6	13	50	1,660
YG-4004055	EM811055	5.5	6	13	50	1,660
YG-4004060	EM811060	6.0	6	13	50	1,660
YG-4004065	EM811065	6.5	8	16	60	2,130
YG-4004070	EM811070	7.0	8	16	60	2,130
YG-4004075	EM811075	7.5	8	16	60	2,130
YG-4004080	EM811080	8.0	8	19	60	2,130
YG-4004085	EM811085	8.5	10	19	70	3,150
YG-4004090	EM811090	9.0	10	19	70	3,150
YG-4004095	EM811095	9.5	10	19	70	3,150
YG-4004100	EM811100	10.0	10	22	70	3,150
YG-4004105	EM811105	10.5	12	22	75	4,320
YG-4004110	EM811110	11.0	12	22	75	4,320
YG-4004115	EM811115	11.5	12	22	75	4,320
YG-4004120	EM811120	12.0	12	26	75	4,320
YG-4004904	EM811904	13.0	12	26	85	5,480
YG-4004140	EM811140	14.0	14	26	85	5,480
YG-4004905	EM811905	14.0	12	26	85	5,480
YG-4004903	EM811903	14.0	16	26	85	7,200
YG-4004906	EM811906	15.0	16	26	90	7,200
YG-4004160	EM811160	16.0	16	32	100	7,200
YG-4004907	EM811907	17.0	16	32	100	9,550
YG-4004180	EM811180	18.0	18	32	100	9,550
YG-4004908	EM811908	18.0	16	32	100	9,550
YG-4004909	EM811909	19.0	20	32	100	11,900
YG-4004200	EM811200	20.0	20	38	105	11,900
YG-4004220	EM811220	22.0	20	38	105	15,500
YG-4004240	EM811240	24.0	25	45	120	19,000
YG-4004250	EM811250	25.0	25	45	120	19,000

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 4 ฟัน ยาว



SERIES EM817
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- 4 flute allows for better workpiece finishes.
- Increased production.

Cutting Data ดูหน้า 134

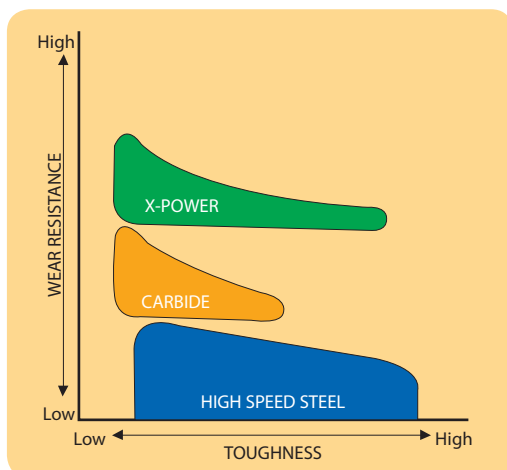
MG

FLUTE
4



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4005020	EM817020	2.0	4	8	40	1,380
YG-4005030	EM817030	3.0	6	12	50	1,990
YG-4005040	EM817040	4.0	6	15	50	1,990
YG-4005050	EM817050	5.0	6	20	60	1,990
YG-4005060	EM817060	6.0	6	20	60	1,990
YG-4005080	EM817080	8.0	8	25	70	2,560
YG-4005100	EM817100	10.0	10	30	90	3,780
YG-4005120	EM817120	12.0	12	30	90	5,190
YG-4005140	EM817140	14.0	16	40	110	7,400
YG-4005160	EM817160	16.0	16	50	110	9,670
YG-4005180	EM817180	18.0	20	50	110	13,150
YG-4005200	EM817200	20.0	20	55	110	16,100
YG-4005250	EM817250	25.0	25	75	140	25,650

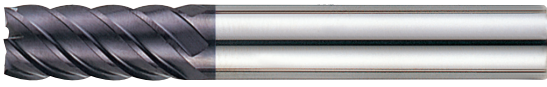
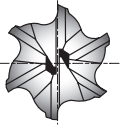


Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 6&8 ฟัน ยาว



SERIES EM812
PLAIN SHANK

- Designed to machine high hardened materials.
- High speed cutting and finish milling with high feed rates.
- Superior workpiece finishes.
- Superior wear resistant.
- Suitable for dry milling.

Cutting Data ดูหน้า 135

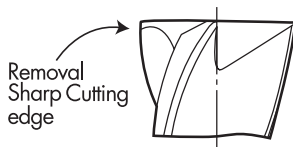
MG

FLUTE
6&8



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อื่น / บาท
YG-4006060	EM812060	6.0	6	13	57	6	1,950
YG-4006070	EM812070	7.0	8	16	63	6	2,470
YG-4006080	EM812080	8.0	8	19	63	6	2,470
YG-4006090	EM812090	9.0	10	19	72	6	3,690
YG-4006100	EM812100	10.0	10	22	72	6	3,690
YG-4006120	EM812120	12.0	12	26	83	6	5,020
YG-4006140	EM812140	14.0	14	26	83	6	6,280
YG-4006901	EM812901	14.0	16	26	83	6	8,430
YG-4006160	EM812160	16.0	16	32	92	6	8,430
YG-4006180	EM812180	18.0	18	32	92	8	9,900
YG-4006200	EM812200	20.0	20	38	104	8	12,400
YG-4006250	EM812250	25.0	25	44	104	8	21,900



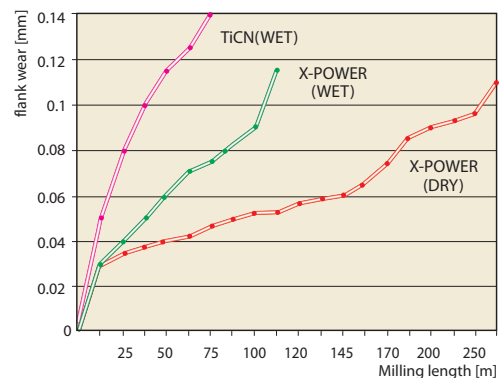
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

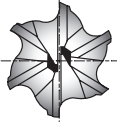
$\mu\text{m} = 1/1000\text{mm}$

TOOL :
EM812100

WORKPIECE :
TOOL STEEL
DIN 1.2713
1300 N/mm²
RPM : 9980
FEED : 5990
climb milling



YG ดอกเอ็นมิล X-POWER 6 ฟัน ยาวพิเศษ



SERIES EM834
PLAIN SHANK

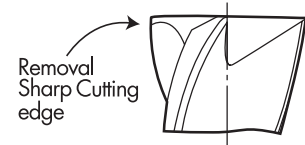
- Designed to machine high hardened materials.
- High speed cutting and finish milling with high feed rates.
- Superior workpiece finishes.
- Superior wear resistant.
- Suitable for dry milling.

Cutting Data ดูหน้า 136



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4007060	EM834060	6.0	6	26	70	2,550
YG-4007080	EM834080	8.0	8	36	90	3,330
YG-4007100	EM834100	10.0	10	46	100	5,180
YG-4007120	EM834120	12.0	12	56	110	7,270
YG-4007160	EM834160	16.0	16	66	130	12,650
YG-4007200	EM834200	20.0	20	76	140	19,900
YG-4007250	EM834250	25.0	25	92	180	37,150



Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน สั้น



SERIES EM876
PLAIN SHANK

- Economic type with short overall length.
- Radius tolerance $\pm 0.02\text{mm}$ & short length of cut.

Cutting Data ดูหน้า 137



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4008010	EM876010	1.0	3	3	38	1,550
YG-4008012	EM876012	1.2	3	3	38	1,550
YG-4008015	EM876015	1.5	3	3	38	1,550
YG-4008020	EM876020	2.0	6	3	50	1,550
YG-4008030	EM876030	3.0	6	4	50	1,550
YG-4008040	EM876040	4.0	6	5	54	1,600
YG-4008050	EM876050	5.0	6	6	54	1,600
YG-4008060	EM876060	6.0	6	7	54	1,600
YG-4008070	EM876070	7.0	8	8	58	2,560
YG-4008080	EM876080	8.0	8	9	58	2,560
YG-4008090	EM876090	9.0	10	10	66	3,990
YG-4008100	EM876100	10.0	10	11	66	3,990
YG-4008120	EM876120	12.0	12	12	73	5,040
YG-4008140	EM876140	14.0	14	14	75	6,080
YG-4008160	EM876160	16.0	16	16	82	7,910
YG-4008180	EM876180	18.0	18	18	84	8,500
YG-4008200	EM876200	20.0	20	20	92	11,400
YG-4008250	EM876250	25.0	25	25	104	19,800

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน ยาว



SERIES EM813
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- For copy-milling machines.

Cutting Data ดูหน้า 137

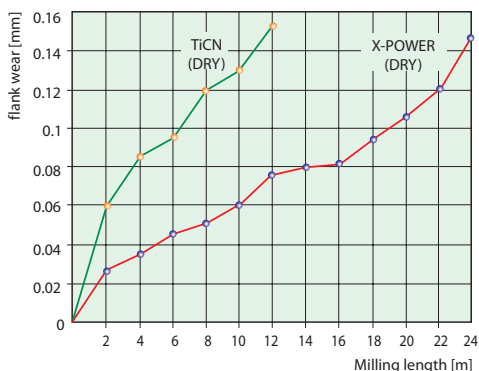


Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4009010	EM813010	1.0	4	2.5	50	1,660
YG-4009901	EM813901	1.0	6	2.5	50	1,740
YG-4009012	EM813012	1.2	4	3	50	1,660
YG-4009015	EM813015	1.5	4	4	50	1,660
YG-4009902	EM813902	1.5	6	4	50	1,740
YG-4009020	EM813020	2.0	6	5	50	1,590
YG-4009030	EM813030	3.0	6	8	60	1,590
YG-4009040	EM813040	4.0	6	8	70	1,650
YG-4009050	EM813050	5.0	6	10	80	1,710
YG-4009060	EM813060	6.0	6	12	90	1,850
YG-4009070	EM813070	7.0	8	14	90	2,900
YG-4009080	EM813080	8.0	8	14	100	2,900
YG-4009090	EM813090	9.0	10	18	100	4,620
YG-4009100	EM813100	10.0	10	18	100	4,620
YG-4009120	EM813120	12.0	12	22	110	5,900
YG-4009140	EM813140	14.0	14	26	110	7,390
YG-4009903	EM813903	14.0	16	26	110	9,790
YG-4009160	EM813160	16.0	16	30	140	9,790
YG-4009180	EM813180	18.0	18	34	140	10,700
YG-4009200	EM813200	20.0	20	38	160	15,300
YG-4009250	EM813250	25.0	25	50	180	24,500

TOOL :
EM813200

WORKPIECE :
STEEL
DIN 1.2436
60 Hrc
RPM : 5260
FEED : 840
climb milling

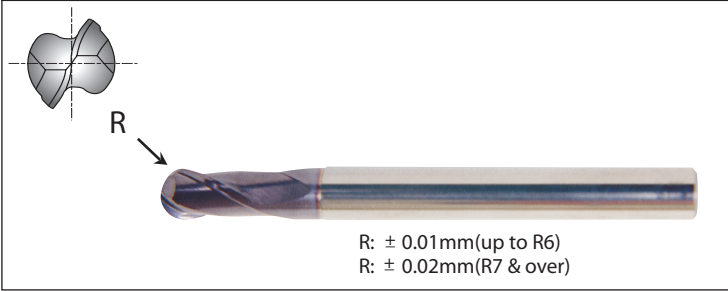


Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน ตัวกลาง มีคอ



SERIES EM899
PLAIN SHANK

- Deep slotting milling is possible by reduced neck
- High efficiency milling is possible in deep slotting with projection of the end mill being long

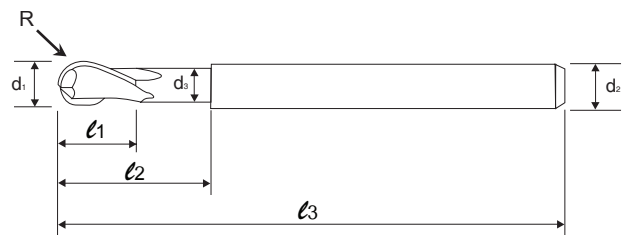
Cutting Data ดูหน้า 138



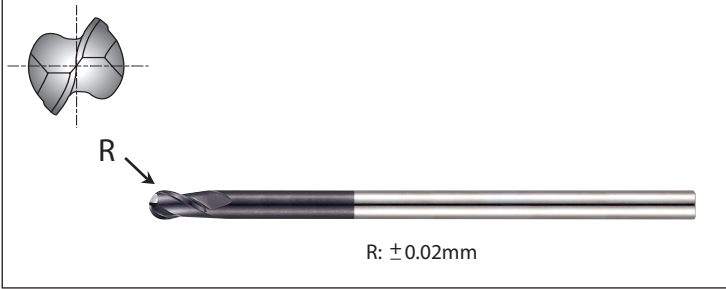
Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1	SHANK DIAMETER d2(h6)	LENGTH OF CUT l1	LENGTH BELOW SHANK l2	OVERALL LENGTH l3	NECK DIAMETER d3	อัน / บาท
YG-4010030	EM899030	3.0	6	8	-	70	-	2,000
YG-4010040	EM899040	4.0	6	8	-	70	-	2,000
YG-4010050	EM899050	5.0	6	12	-	80	-	2,070
YG-4010060	EM899060	6.0	6	12	22	80	5.8	2,240
YG-4010070	EM899070	7.0	8	14	-	90	-	3,490
YG-4010080	EM899080	8.0	8	14	27	90	7.8	3,520
YG-4010100	EM899100	10.0	10	18	31	100	9.8	5,710
YG-4010120	EM899120	12.0	12	22	35	110	11.8	7,170
YG-4010140	EM899140	14.0	12	26	-	120	-	7,970
YG-4010160	EM899160	16.0	16	30	50	140	15.8	10,230
YG-4010180	EM899180	18.0	16	34	-	140	-	11,100
YG-4010200	EM899200	20.0	20	38	58	160	19.8	15,900
YG-4010250	EM899250	25.0	25	55	75	180	24.8	26,550

Mill Dia. Tolerance	Shank Dia. Tolerance
d ₁ < 6 0 -0.028	h6
d ₁ ≥ 6 0 -0.038	



YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุ่นคอยยาว



SERIES EM838
PLAIN SHANK

- Longer overall length than EM813, EM823 type and suitable for machining deeply located area.

Cutting Data ดูหน้า 139



Unit : mm

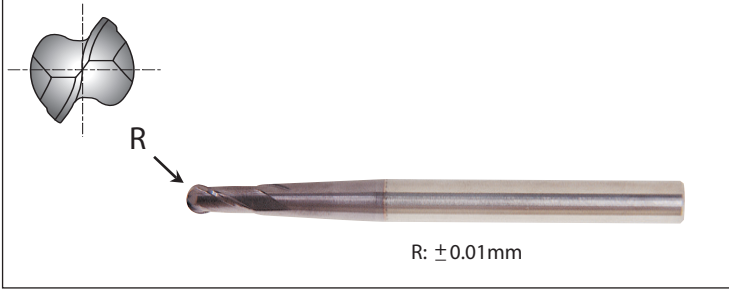
รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4011020	EM838020	2.0	3	6	80	2,230
YG-4011030	EM838030	3.0	3	8	100	2,230
YG-4011040	EM838040	4.0	4	8	100	2,230
YG-4011050	EM838050	5.0	6	10	120	2,410
YG-4011060	EM838060	6.0	6	10	120	2,410
YG-4011080	EM838080	8.0	8	14	140	3,900
YG-4011100	EM838100	10.0	10	18	180	7,380
YG-4011120	EM838120	12.0	12	22	200	9,410
YG-4011160	EM838160	16.0	16	30	250	16,150
YG-4011200	EM838200	20.0	20	38	250	25,200

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุ่นตัวเตเปอร์



SERIES EM902
PLAIN SHANK

- High efficiency milling is possible in deep slotting with projection of the end mill being long

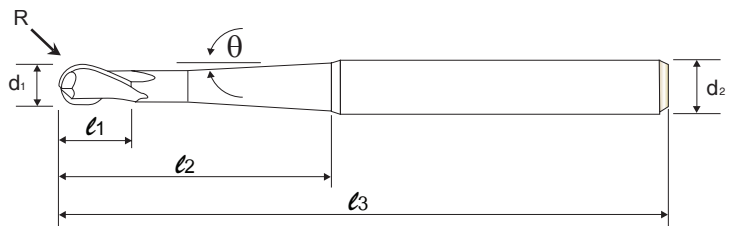


Cutting Data ดูหน้า 140

Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1	SHANK DIAMETER d2(h6)	LENGTH OF CUT l1	LENGTH BELOW SHANK l2	OVERALL LENGTH l3	NECK TAPER ANGLE θ	อัน / บาท
YG-4012010	EM902010	1 x R0.5	6	2	23	60	1°30'	2,220
YG-4012901	EM902901	1 x R0.5	6	2	23	60	5°	2,220
YG-4012902	EM902902	1 x R0.5	6	2	42	80	3°	2,340
YG-4012020	EM902020	2 x R1	6	4	23	60	1°30'	2,000
YG-4012903	EM902903	2 x R1	6	4	23	60	5°	2,000
YG-4012904	EM902904	2 x R1	6	4	41	80	3°	2,180
YG-4012030	EM902030	3 x R1.5	6	6	32	70	3°	2,010
YG-4012905	EM902905	3 x R1.5	6	6	52	90	1°30'	2,250
YG-4012040	EM902040	4 x R2	6	8	28	70	3°	2,030
YG-4012906	EM902906	4 x R2	6	8	49	90	1°30'	2,250
YG-4012050	EM902050	5 x R2.5	8	10	41	90	3°	3,230
YG-4012907	EM902907	5 x R2.5	8	10	61	110	1°30'	3,770
YG-4012060	EM902060	6 x R3	8	12	34	90	3°	3,230
YG-4012908	EM902908	6 x R3	8	12	53	110	1°30'	3,770
YG-4012080	EM902080	8 x R4	10	14	36	100	3°	5,710
YG-4012909	EM902909	8 x R4	10	14	55	120	1°30'	6,410
YG-4012100	EM902100	10 x R5	12	18	40	110	3°	7,160
YG-4012910	EM902910	10 x R5	12	18	59	130	1°30'	6,410
YG-4012120	EM902120	12 x R6	16	22	63	140	3°	11,910
YG-4012911	EM902911	12 x R6	16	22	83	160	1°30'	12,260

Mill Dia. Tolerance	Shank Dia. Tolerance
d ₁ < 6 0 -0.028	h6
d ₁ ≥ 6 0 -0.038	



YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน รุ่น High Precision มีคอ



SERIES EM878
PLAIN SHANK

- Designed for high precision milling operation.
- Radius tolerance $\pm 0.01\text{mm}$ and improved surface roughness.

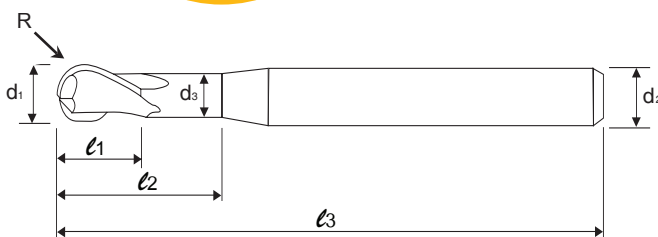
Cutting Data ดูหน้า 137



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1(e8)	SHANK DIAMETER d2(h6)	LENGTH OF CUT l_1	LENGTH BELOW SHANK l_2	OVERALL LENGTH l_3	NECK DIAMETER d3	อื่น / บาท
YG-4013010	EM878010	1.0	4	1	2.2	50	0.95	1,860
YG-4013901	EM878901	1.0	6	1	2.2	50	0.95	•
YG-4013012	EM878012	1.2	4	1.2	2.6	50	1.1	1,860
YG-4013015	EM878015	1.5	4	1.5	3	50	1.4	1,860
YG-4013020	EM878020	2.0	6	2	4	50	1.9	1,770
YG-4013030	EM878030	3.0	6	3	6	60	2.9	1,770
YG-4013040	EM878040	4.0	6	4	8	70	3.9	1,850
YG-4013050	EM878050	5.0	6	5	10	80	4.9	1,910
YG-4013060	EM878060	6.0	6	6	12	90	5.9	2,060
YG-4013070	EM878070	7.0	8	7	14	90	6.9	3,230
YG-4013080	EM878080	8.0	8	8	16	100	7.9	3,230
YG-4013090	EM878090	9.0	10	9	18	100	8.9	5,200
YG-4013100	EM878100	10.0	10	10	20	100	9.9	5,200
YG-4013120	EM878120	12.0	12	12	24	110	11.9	6,650
YG-4013140	EM878140	14.0	14	14	28	110	13.8	8,370
YG-4013160	EM878160	16.0	16	16	32	140	15.8	11,100
YG-4013180	EM878180	18.0	18	18	36	140	17.8	12,100
YG-4013200	EM878200	20.0	20	20	40	160	19.8	17,200
YG-4013250	EM878250	25.0	25	25	50	180	24.8	27,600

• Order

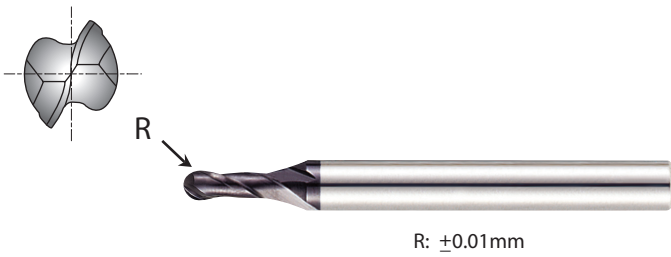


Tolerances according to DIN 7160 & 7161

		Tolerance range in μm				
		Nominal-Diameter in mm				
		from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14	-20	-25	-32	-40	
	-28	-38	-47	-59	-73	
h6	0	0	0	0	0	
	-6	-8	-9	-11	-13	

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน แบบมิลิ



SERIES EM865
PLAIN SHANK

- High precision milling in medical, optical, electronics and aerospace industrials.
- Excellent performance at dry cutting condition.
- Excellent performance on high hardened steel up to HRC70.

Cutting Data ดูหน้า 142



Unit : mm

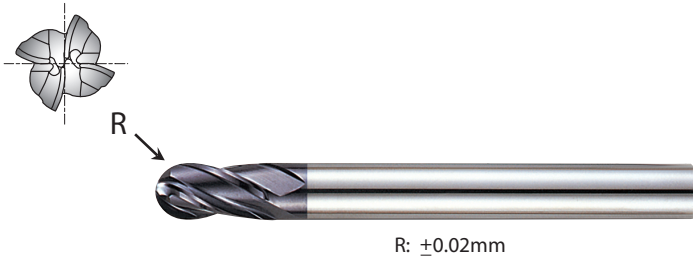
รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4014006	EM865006	0.6	3	1.1	40	2,130
YG-4014007	EM865007	0.7	3	1.5	40	1,880
YG-4014008	EM865008	0.8	3	2.0	40	1,750
YG-4014009	EM865009	0.9	3	2.2	40	1,750
YG-4014010	EM865010	1.0	3	2.5	40	1,500
YG-4014011	EM865011	1.1	3	3.0	40	1,500
YG-4014012	EM865012	1.2	3	3.0	40	1,500
YG-4014013	EM865013	1.3	3	3.5	40	1,500
YG-4014014	EM865014	1.4	3	3.5	40	1,500
YG-4014015	EM865015	1.5	3	4.0	40	1,500



unit:mm

RADIUS TOLERANCE	± 0.010
MILL DIA. TOLERANCE	-0.014 -0.028
SHANK DIA. TOLERANCE	0 -0.006

YG ดอกเอ็นมิล X-POWER หัวบอล 4 ฟัน ยาว



SERIES EM815
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- For copy-milling machines.
- 4 FLUTE design-higher feed than EM813, EM823 series.

Cutting Data ดูหน้า 141



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4015010	EM815010	1.0	4	2.5	50	2,190
YG-4015901	EM815901	1.0	6	2.5	50	2,290
YG-4015015	EM815015	1.5	4	4	50	2,190
YG-4015902	EM815902	1.5	6	4	50	2,290
YG-4015020	EM815020	2.0	6	5	50	2,100
YG-4015030	EM815030	3.0	6	8	60	2,100
YG-4015040	EM815040	4.0	6	8	70	2,150
YG-4015050	EM815050	5.0	6	10	80	2,220
YG-4015060	EM815060	6.0	6	12	90	2,360
YG-4015070	EM815070	7.0	8	14	90	3,480
YG-4015080	EM815080	8.0	8	14	100	3,480
YG-4015090	EM815090	9.0	10	18	100	5,340
YG-4015100	EM815100	10.0	10	18	100	5,340
YG-4015120	EM815120	12.0	12	22	110	6,720
YG-4015140	EM815140	14.0	14	26	110	8,320
YG-4015903	EM815903	14.0	16	26	110	11,040
YG-4015160	EM815160	16.0	16	30	140	11,040
YG-4015180	EM815180	18.0	18	34	140	12,900
YG-4015200	EM815200	20.0	20	38	160	18,400
YG-4015250	EM815250	25.0	25	50	180	29,500

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER กัดหยาบ สีน



SERIES EM832
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- High velocity milling of hardened steels.
- For dry and wet milling.
- Fast chip ejection

Cutting Data ดูหน้า 143



Unit : mm

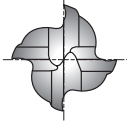
รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อัน / บาท
YG-4016060	EM832060	6.0	6	7	54	3	2,060
YG-4016070	EM832070	7.0	8	8	58	3	2,410
YG-4016080	EM832080	8.0	8	9	58	3	2,410
YG-4016090	EM832090	9.0	10	13	66	4	3,600
YG-4016100	EM832100	10.0	10	14	66	4	3,600
YG-4016120	EM832120	12.0	12	16	73	4	4,620
YG-4016140	EM832140	14.0	14	18	75	4	5,600
YG-4016160	EM832160	16.0	16	22	82	4	7,520
YG-4016180	EM832180	18.0	18	24	84	4	9,650
YG-4016200	EM832200	20.0	20	26	92	4	12,100
YG-4016250	EM832250	25.0	25	25	110	5	21,300

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER กัดหยาบ ยาว



SERIES EM814
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- High velocity milling of hardened steels.
- For dry and wet milling.
- Fast chip ejection.
- Longer flute length than EM832, EM842 series.

Cutting Data ดูหน้า 143

MG

FLUTE
3 - 5



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อัน / บาท
YG-4017060	EM814060	6.0	6	16	57	3	2,210
YG-4017070	EM814070	7.0	8	16	63	3	2,590
YG-4017080	EM814080	8.0	8	16	63	3	2,590
YG-4017090	EM814090	9.0	10	19	72	4	3,870
YG-4017100	EM814100	10.0	10	22	72	4	3,870
YG-4017120	EM814120	12.0	12	26	83	4	4,960
YG-4017140	EM814140	14.0	14	26	83	4	6,020
YG-4017901	EM814901	14.0	16	26	83	4	8,080
YG-4017160	EM814160	16.0	16	32	92	4	8,080
YG-4017180	EM814180	18.0	18	32	92	4	8,080
YG-4017200	EM814200	20.0	20	38	104	4	10,400
YG-4017250	EM814250	25.0	25	45	121	5	13,100

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER หัวบอล กัดหยาบ ยาว



R: $\pm 0.02\text{mm}$

SERIES EM833
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- High velocity milling of hardened steels.
- For dry and wet milling.
- Fast chip ejection.

Cutting Data ดูหน้า 143



Unit : mm

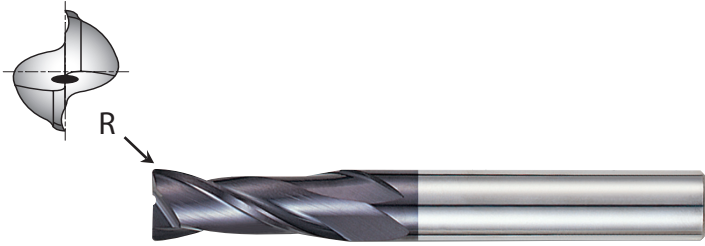
รหัสสินค้า	EDP No.	MILL DIAMETER h10	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	จำนวนฟัน	อื่น / บาท
YG-4018060	EM833060	6.0	6	16	57	3	3,540
YG-4018080	EM833080	8.0	8	16	63	3	4,140
YG-4018100	EM833100	10.0	10	22	72	4	6,180
YG-4018120	EM833120	12.0	12	26	83	4	7,940
YG-4018140	EM833140	14.0	14	26	83	4	9,630
YG-4018160	EM833160	16.0	16	32	92	4	12,930
YG-4018180	EM833180	18.0	18	32	92	4	16,600
YG-4018200	EM833200	20.0	20	38	104	4	20,900

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
h10	0 -40	0 -48	0 -58	0 -70	0 -84
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 2 ฟัน มุม R ยาว



SERIES EM818
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Superior workpiece finishes.
- Increased feed rates.

Cutting Data ดูหน้า 144



Unit : mm

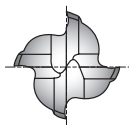
รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4019030	EM818030	3 x R0.3	6	12	50	2,200
YG-4019040	EM818040	4 x R0.3	6	15	50	2,200
YG-4019911	EM818911	4 x R0.5	6	15	50	2,200
YG-4019050	EM818050	5 x R0.3	6	20	60	2,200
YG-4019912	EM818912	5 x R0.5	6	20	60	2,200
YG-4019913	EM818913	6 x R0.3	6	20	60	2,200
YG-4019060	EM818060	6 x R0.5	6	20	60	2,200
YG-4019901	EM818901	6 x R1	6	20	70	2,200
YG-4019914	EM818914	8 x R0.3	8	25	70	2,810
YG-4019080	EM818080	8 x R0.5	8	25	70	2,810
YG-4019902	EM818902	8 x R1	8	25	70	2,810
YG-4019903	EM818903	8 x R1.5	8	25	70	3,070
YG-4019904	EM818904	8 x R2	8	25	70	3,070
YG-4019915	EM818915	10 x R0.3	10	30	90	4,160
YG-4019100	EM818100	10 x R0.5	10	30	90	4,160
YG-4019905	EM818905	10 x R1	10	30	90	4,160
YG-4019906	EM818906	10 x R1.5	10	30	90	4,540
YG-4019907	EM818907	10 x R2	10	30	90	4,540
YG-4019120	EM818120	12 x R0.5	12	30	90	5,700
YG-4019908	EM818908	12 x R1	12	30	90	5,700
YG-4019909	EM818909	12 x R1.5	12	30	90	6,220
YG-4019910	EM818910	12 x R2	12	30	90	6,220
YG-4019160	EM818160	16 x R0.5	16	50	110	10,640
YG-4019916	EM818916	16 x R1	16	50	110	10,640
YG-4019917	EM818917	16 x R1.5	16	50	110	10,640
YG-4019918	EM818918	16 x R2	16	50	110	10,640
YG-4019200	EM818200	20 x R0.5	20	55	110	17,700
YG-4019919	EM818919	20 x R1	20	55	110	17,700
YG-4019920	EM818920	20 x R1.5	20	55	110	19,300
YG-4019921	EM818921	20 x R2	20	55	110	19,300

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 4 ฟัน มุม R ยาว



R



SERIES EM819
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- 4 Flute allows for better workpiece finishes.
- Increased production.

Cutting Data ดูหน้า 144

MG

FLUTE
4



Unit : mm

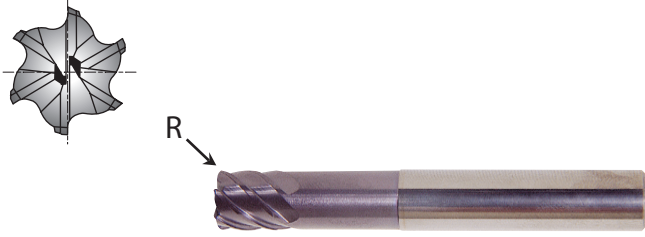
รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4020030	EM819030	3 x R0.3	6	12	50	2,420
YG-4020040	EM819040	4 x R0.3	6	15	50	2,420
YG-4020911	EM819911	4 x R0.5	6	15	50	2,420
YG-4020050	EM819050	5 x R0.3	6	20	60	2,420
YG-4020912	EM819912	5 x R0.5	6	20	60	2,420
YG-4020913	EM819913	6 x R0.3	6	20	60	2,420
YG-4020060	EM819060	6 x R0.5	6	20	60	2,420
YG-4020901	EM819901	6 x R1	6	20	70	2,420
YG-4020914	EM819914	8 x R0.3	8	25	70	3,100
YG-4020080	EM819080	8 x R0.5	8	25	70	3,100
YG-4020902	EM819902	8 x R1	8	25	70	3,100
YG-4020903	EM819903	8 x R1.5	8	25	70	3,370
YG-4020904	EM819904	8 x R2	8	25	70	3,370
YG-4020915	EM819915	10 x R0.3	10	30	90	4,570
YG-4020100	EM819100	10 x R0.5	10	30	90	4,570
YG-4020905	EM819905	10 x R1	10	30	90	4,570
YG-4020906	EM819906	10 x R1.5	10	30	90	4,990
YG-4020907	EM819907	10 x R2	10	30	90	4,990
YG-4020120	EM819120	12 x R0.5	12	30	90	6,270
YG-4020908	EM819908	12 x R1	12	30	90	6,270
YG-4020909	EM819909	12 x R1.5	12	30	90	6,840
YG-4020910	EM819910	12 x R2	12	30	90	6,840
YG-4020160	EM819160	16 x R0.5	16	50	110	11,700
YG-4020916	EM819916	16 x R1	16	50	110	11,700
YG-4020917	EM819917	16 x R1.5	16	50	110	12,770
YG-4020918	EM819918	16 x R2	16	50	110	12,770
YG-4020200	EM819200	20 x R0.5	20	55	110	19,400
YG-4020919	EM819919	20 x R1	20	55	110	19,400
YG-4020920	EM819920	20 x R1.5	20	55	110	21,200
YG-4020921	EM819921	20 x R2	20	55	110	21,200

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 6 ฟัน แบบ STUB มีคอ มุม R



SERIES EM897
PLAIN SHANK

- High speed cutting
- Excellent performance in dry cutting
- Cutting up to the dimension three times as much as the diameter by reduced Neck

Cutting Data คู่มือหน้า 145

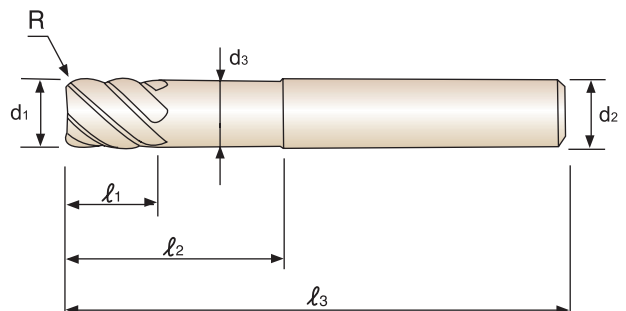


Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1	SHANK DIAMETER d2(h6)	LENGTH OF CUT l1	LENGTH BELOW SHANK l2	OVERALL LENGTH l3	NECK DIAMETER d3	อื่น / บาท
YG-4021060	EM897060	6.0 x R0.5	6	6	14	50	5.7	2,360
YG-4021080	EM897080	8.0 x R0.5	8	8	24	60	7.65	2,850
YG-4021100	EM897100	10.0 x R1.0	10	10	30	70	9.65	4,400
YG-4021120	EM897120	12.0 x R1.0	12	12	30	75	11.6	5,250

Unit : mm

Mill Dia. Tolerance	Shank Dia. Tolerance
DIA. 6 -0.015 -0.038	h6
DIA. 8~ -0.020 -0.047	



YG ดอกเอ็นมิล X-POWER 6 ฟัน มุม R ยาว



SERIES EM835
PLAIN SHANK

- Designed to machine high hardened materials.
- High speed cutting and finish milling with high feed rates.
- Superior workpiece finishes.
- Superior wear resistant.
- Suitable for dry milling.

Cutting Data ดูหน้า 136



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อื่น / บาท
YG-4022060	EM835060	6 x R0.5	6	13	70	2,680
YG-4022080	EM835080	8 x R0.5	8	19	90	3,400
YG-4022100	EM835100	10 x R0.5	10	22	100	5,070
YG-4022901	EM835901	10 x R1.0	10	22	100	5,070
YG-4022120	EM835120	12 x R0.5	12	26	110	6,900
YG-4022902	EM835902	12 x R1.0	12	26	110	6,900
YG-4022160	EM835160	16 x R1.0	16	32	130	11,600
YG-4022903	EM835903	16 x R1.5	16	32	130	12,640
YG-4022200	EM835200	20 x R1.0	20	38	140	17,100
YG-4022904	EM835904	20 x R1.5	20	38	140	•
YG-4022905	EM835905	20 x R2.0	20	38	140	•

• Order

Tolerances according to DIN 7160 & 7161

	Tolerance range in μm				
	Nominal-Diameter in mm				
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 4 ฟัน แบบ STUB มีคอค มุม R



SERIES EM839
PLAIN SHANK

- Designed to machine tool steel, alloy steel, mold steel and other high hardened materials.
- Superior workpiece finishes.
- Increased feed rates.

Cutting Data คู่มือหน้า 146

MG

FLUTE
4



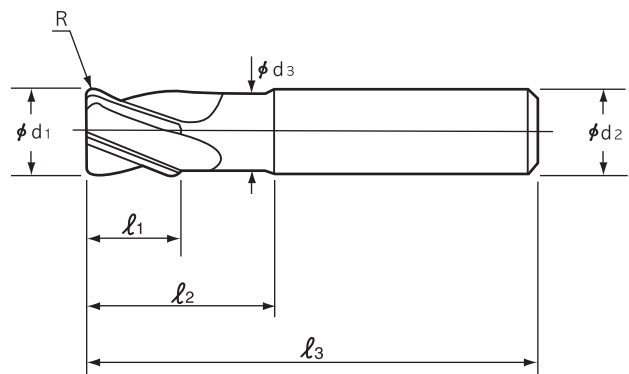
Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1(e8)	SHANK DIAMETER d2(h6)	LENGTH OF CUT l1	LENGTH BELLOW SHANK l2	OVERALL LENGTH l3	NECK DIAMETER d3	อัน / บาท
YG-4023020	EM839020	2 x R0.2	6	2.5	5	50	1.9	1,830
YG-4023025	EM839025	2.5 x R0.25	6	3	6	50	2.4	1,830
YG-4023030	EM839030	3 x R0.3	6	4	7	50	2.8	1,830
YG-4023035	EM839035	3.5 x R0.35	6	4.5	8	50	3.2	1,830
YG-4023040	EM839040	4 x R0.4	6	5	9	50	3.7	1,830
YG-4023050	EM839050	5 x R0.5	6	6	12	50	4.6	1,830
YG-4023060	EM839060	6 x R0.6	6	7	14	55	5.6	1,830
YG-4023080	EM839080	8 x R0.8	8	10	18	60	7.4	2,340
YG-4023100	EM839100	10 x R1	10	12	25	70	9.4	3,470
YG-4023120	EM839120	12 x R1.2	12	15	30	80	11.4	4,750
YG-4023160	EM839160	16 x R1.6	16	18	35	90	15.4	8,600

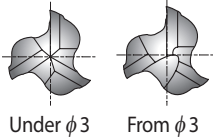
Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$



YG ดอกเอ็นมิล X-POWER 3 ฟัน แบบมินิ ตัวสั้น



SERIES EM836
PLAIN SHANK

- The MINIATURE END MILL developed by Y.G-1 is universally adopted as the most cost effective system for small milling cutters and possesses the advantage of 2 flute and 4 flute end mill.

Cutting Data ดูหน้า 133



Unit : mm

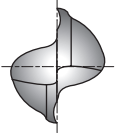
รหัสสินค้า	EDP No.	MILL DIAMETER e8	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	อัน / บาท
YG-4024010	EM836010	1.0	4	2	35	1,030
YG-4024020	EM836020	2.0	4	4	35	1,030
YG-4024030	EM836030	3.0	6	5	36	1,330
YG-4024040	EM836040	4.0	6	7	38	1,330
YG-4024050	EM836050	5.0	6	8	39	1,330
YG-4024060	EM836060	6.0	6	8	39	1,330
YG-4024080	EM836080	8.0	8	11	43	1,710
YG-4024100	EM836100	10.0	10	13	50	2,520
YG-4024120	EM836120	12.0	12	15	55	3,240
YG-4024140	EM836140	14.0	14	15	58	4,110
YG-4024160	EM836160	16.0	16	18	62	5,380
YG-4024180	EM836180	18.0	18	20	70	7,200
YG-4024200	EM836200	20.0	20	22	75	9,000

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-14 -28	-20 -38	-25 -47	-32 -59	-40 -73
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 2 ฟัน เตเปอร์ สั้น



SERIES EM837
PLAIN SHANK

- Designed for milling die cavity.
- Suitable for machining tool steel alloy steel, mold steel and other high hardened materials.

Cutting Data ดูหน้า 146



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	OVERALL LENGTH	TAPER ANGLE	อัน / บาท
YG-4025913	EM837913	2	4	6	45	30'	1,950
YG-4025020	EM837020	2	4	6	45	1°	1,950
YG-4025901	EM837901	2	4	6	45	2°	2,290
YG-4025902	EM837902	2	4	6	45	3°	2,690
YG-4025914	EM837914	3	6	10	55	30'	1,950
YG-4025030	EM837030	3	6	10	55	1°	1,950
YG-4025903	EM837903	3	6	10	55	2°	2,200
YG-4025904	EM837904	3	6	10	55	3°	2,200
YG-4025915	EM837915	4	6	15	55	30'	2,200
YG-4025040	EM837040	4	6	15	55	1°	2,200
YG-4025905	EM837905	4	6	15	55	2°	2,590
YG-4025906	EM837906	4	6	15	55	3°	3,070
YG-4025916	EM837916	5	6	15	60	30'	2,200
YG-4025050	EM837050	5	6	15	60	1°	2,200
YG-4025907	EM837907	5	6	15	60	2°	2,200
YG-4025908	EM837908	5	6	15	60	3°	2,200
YG-4025917	EM837917	6	6	20	60	30'	2,200
YG-4025060	EM837060	6	6	20	60	1°	2,200
YG-4025909	EM837909	6	6	20	60	2°	2,590
YG-4025910	EM837910	6	8	20	65	3°	3,070
YG-4025918	EM837918	8	8	25	70	30'	•
YG-4025080	EM837080	8	8	25	70	1°	2,200
YG-4025911	EM837911	8	8	25	70	2°	2,200
YG-4025912	EM837912	8	10	25	75	3°	2,200

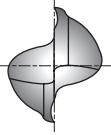
• Order

Tolerances according to DIN 7160 & 7161

Tolerance range in μm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
MILL DIA. TOLERANCE	0 -30				
h6	0 -6	0 -8	0 -9	0 -11	0 -13

$\mu\text{m} = 1/1000\text{mm}$

YG ดอกเอ็นมิล X-POWER 2 ฟัน กัดร่องเล็ก



SERIES EM883
PLAIN SHANK

MG

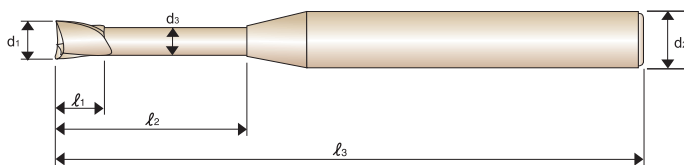
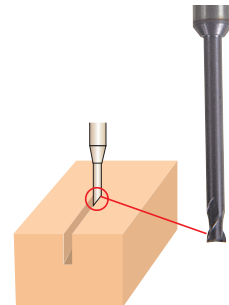
FLUTE
2



Cutting Data ดูหน้า 147

Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER d1	SHANK DIAMETER d2(h6)	LENGTH OF CUT ℓ1	LENGTH BELOW SHANK ℓ2	OVERALL LENGTH ℓ3	NECK DIAMETER d3	อัน / บาท
YG-4026908	EM883908	0.8	4	1.2	6	45	0.75	1,600
YG-4026909	EM883909	0.8	4	1.2	8	45	0.75	1,600
YG-4026910	EM883910	1.0	4	1.5	6	45	0.97	1,430
YG-4026912	EM883912	1.0	4	1.5	8	45	0.95	1,430
YG-4026914	EM883914	1.0	4	1.5	12	45	0.93	1,600
YG-4026915	EM883915	1.2	4	1.8	8	45	1.15	1,430
YG-4026917	EM883917	1.2	4	1.8	12	45	1.13	1,600
YG-4026920	EM883920	1.4	4	2.1	12	45	1.33	1,600
YG-4026923	EM883923	1.5	4	2.3	8	45	1.45	1,430
YG-4026924	EM883924	1.5	4	2.3	10	45	1.45	1,430
YG-4026925	EM883925	1.5	4	2.3	12	45	1.43	1,520
YG-4026927	EM883927	1.5	4	2.3	16	50	1.41	1,600
YG-4026932	EM883932	1.6	4	2.4	12	45	1.53	1,520
YG-4026946	EM883946	1.8	4	2.7	12	45	1.73	1,520
YG-4026960	EM883960	2.0	4	3.0	12	45	1.93	1,370
YG-4026962	EM883962	2.0	4	3.0	16	50	1.91	1,480
YG-4026968	EM883968	2.5	4	3.7	12	45	2.40	1,370
YG-4026970	EM883970	2.5	4	3.7	16	55	2.40	1,480
YG-4026977	EM883977	3.0	6	4.5	14	50	2.85	2,040
YG-4026979	EM883979	3.0	6	4.5	18	55	2.85	2,100



unit:mm

MILL DIA. TOLERANCE	0 -0.015
SHANK DIA. TOLERANCE	0 -0.008

YG ดอกเอ็นมิล X-POWER หัวบอล 2 ฟัน กัดร่องเล็ก



SERIES EM886
PLAIN SHANK

Cutting Data ดูหน้า 147



Unit : mm

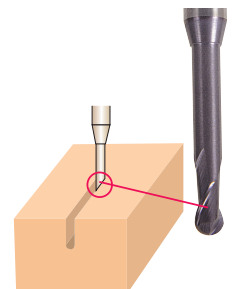
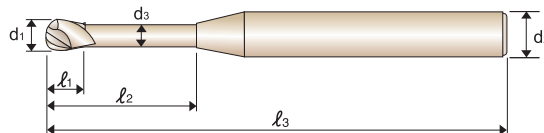
รหัสสินค้า	EDP No.	MILL DIAMETER d1(e8)	SHANK DIAMETER d2(h6)	LENGTH OF CUT l_1	LENGTH BELLOW SHANK l_2	OVERALL LENGTH l_3	NECK DIAMETER d3	อัน / บาท
YG-4027006	EM886006	0.6	3	0.9	6	35	0.55	2,630
YG-4027008	EM886008	0.8	4	1.2	6	45	0.75	2,050
YG-4027901	EM886901	0.8	4	1.2	8	45	0.75	2,050
YG-4027010	EM886010	1.0	4	1.5	6	45	0.97	1,890
YG-4027902	EM886902	1.0	4	1.5	8	45	0.95	1,890
YG-4027904	EM886904	1.0	4	1.5	12	45	0.93	2,010
YG-4027012	EM886012	1.2	4	1.8	8	45	1.15	1,890
YG-4027905	EM886905	1.2	4	1.8	12	45	1.13	2,010
YG-4027014	EM886014	1.4	4	2.1	12	45	1.33	2,010
YG-4027015	EM886015	1.5	4	2.3	8	45	1.45	1,890
YG-4027906	EM886906	1.5	4	2.3	12	45	1.43	2,010
YG-4027907	EM886907	1.5	4	2.3	16	50	1.41	2,150
YG-4027016	EM886016	1.6	4	2.4	16	50	1.51	2,150
YG-4027018	EM886018	1.8	4	2.7	16	50	1.71	2,150
YG-4027020	EM886020	2.0	4	3.0	8	45	1.95	1,770
YG-4027908	EM886908	2.0	4	3.0	12	45	1.93	•
YG-4027909	EM886909	2.0	4	3.0	16	50	1.91	1,890
YG-4027910	EM886910	2.0	4	3.0	20	55	1.89	2,010
YG-4027030	EM886030	3.0	6	4.5	16	55	2.85	2,630
YG-4027911	EM886911	3.0	6	4.5	20	60	2.85	2,820
YG-4027040	EM886040	4.0	6	6.0	16	60	3.85	2,630
YG-4027912	EM886912	4.0	6	6.0	20	65	3.85	2,820
YG-4027913	EM886913	4.0	6	6.0	25	70	3.85	•

• Order



unit:mm

MILL DIAMETER	up to 3	over 3
MILL DIA. TOLERANCE	-0.014 -0.028	-0.020 -0.038
SHANK DIA. TOLERANCE	h6	



YG ดอกเอ็นมิล X-POWER 4 ฟัน ตัวเตเปอร์ แบบยาว



SERIES EM889
PLAIN SHANK

Cutting Data ดูหน้า 148

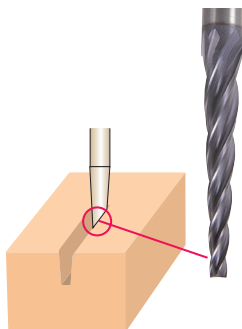
MG

FLUTE
2



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	TAPER ANGLE	OVERALL LENGTH	อื่น / บาท
YG-4028952	EM889952	1.0	4	8	30'	45	2,400
YG-4028954	EM889954	1.0	4	12	30'	45	2,400
YG-4028010	EM889010	1.0	4	8	1°	45	2,400
YG-4028959	EM889959	1.0	4	12	1°	45	2,400
YG-4028960	EM889960	1.0	4	8	1°30'	45	2,850
YG-4028962	EM889962	1.0	4	12	1°30'	45	2,850
YG-4028963	EM889963	1.0	4	8	2°	45	2,850
YG-4028965	EM889965	1.0	4	12	2°	45	2,850
YG-4028968	EM889968	1.2	4	8	30'	45	2,400
YG-4028970	EM889970	1.2	4	12	30'	45	2,400
YG-4028012	EM889012	1.2	4	8	1°	45	2,400
YG-4028977	EM889977	1.2	4	12	1°	45	2,400
YG-4028979	EM889979	1.2	4	8	1°30'	45	2,850
YG-4028981	EM889981	1.2	4	12	1°30'	45	2,850
YG-4028983	EM889983	1.2	4	8	2°	45	2,850
YG-4028985	EM889985	1.2	4	12	2°	45	2,850
YG-4028987	EM889987	1.5	4	8	30'	45	2,850
YG-4028991	EM889991	1.5	4	12	30'	45	2,850
YG-4028992	EM889992	1.5	4	16	30'	50	2,960
YG-4028015	EM889015	1.5	4	8	1°	45	2,400



unit:mm

MILL DIA. TOLERANCE	0 -0.015
TAPER ANGLE TOLERANCE	± 5'
SHANK DIA. TOLERANCE	0 -0.008

YG ดอกเอ็นมิล X-POWER 4 ฟัน ตัวเดเปอร์ แบบยาว



SERIES EM889
PLAIN SHANK

Cutting Data ดูหน้า 148

MG

FLUTE
2

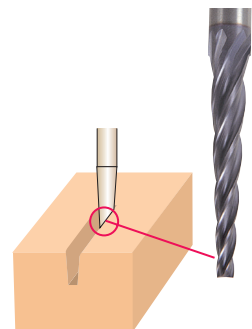


Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	TAPER ANGLE	OVERALL LENGTH	อัน / บาท
YG-4028801	EM889801	1.5	4	12	1°	45	2,400
YG-4028802	EM889802	1.5	4	16	1°	50	2,520
YG-4028804	EM889804	1.5	4	8	1°30'	45	2,850
YG-4028806	EM889806	1.5	4	12	1°30'	45	2,850
YG-4028807	EM889807	1.5	4	16	1°30'	50	2,960
YG-4028809	EM889809	1.5	4	8	2°	45	2,850
YG-4028811	EM889811	1.5	4	12	2°	45	2,850
YG-4028812	EM889812	1.5	4	16	2°	50	2,960
YG-4028869	EM889869	2.0	4	12	30'	45	2,250
YG-4028870	EM889870	2.0	4	16	30'	50	2,340
YG-4028878	EM889878	2.0	4	12	1°	45	2,250
YG-4028879	EM889879	2.0	4	16	1°	50	2,370
YG-4028883	EM889883	2.0	4	12	1°30'	45	2,660
YG-4028884	EM889884	2.0	4	16	1°30'	50	2,770
YG-4028888	EM889888	2.0	4	12	2°	45	2,660
YG-4028889	EM889889	2.0	4	16	2°	50	2,770

unit:mm

MILL DIA. TOLERANCE	0 -0.015
TAPER ANGLE TOLERANCE	± 5'
SHANK DIA. TOLERANCE	0 -0.008



YG ดอกเอ็นมิล X-POWER หัวบอล 4 ฟัน ตัวเดเปอร์ ยาวพิเศษ

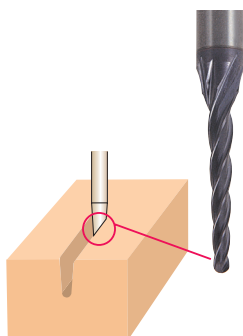


Cutting Data ดูหน้า 148



Unit : mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	TAPER ANGLE	OVERALL LENGTH	อัน / บาท
YG-4029909	EM890909	1.0	4	8	30'	45	3,010
YG-4029911	EM890911	1.0	4	12	30'	45	3,010
YG-4029010	EM890010	1.0	4	8	1°	45	3,010
YG-4029916	EM890916	1.0	4	12	1°	45	3,010
YG-4029917	EM890917	1.0	4	8	1°30'	45	3,590
YG-4029919	EM890919	1.0	4	12	1°30'	45	3,590
YG-4029920	EM890920	1.0	4	8	2°	45	3,590
YG-4029922	EM890922	1.0	4	12	2°	45	3,590
YG-4029923	EM890923	1.2	4	8	30'	45	3,010
YG-4029925	EM890925	1.2	4	12	30'	45	3,010
YG-4029012	EM890012	1.2	4	8	1°	45	3,010
YG-4029932	EM890932	1.2	4	12	1°	45	3,010
YG-4029934	EM890934	1.2	4	8	1°30'	45	3,590
YG-4029936	EM890936	1.2	4	12	1°30'	45	3,590
YG-4029938	EM890938	1.2	4	8	2°	45	3,590
YG-4029940	EM890940	1.2	4	12	2°	45	3,590
YG-4029942	EM890942	1.5	4	8	30'	45	3,010
YG-4029944	EM890944	1.5	4	12	30'	45	3,010
YG-4029945	EM890945	1.5	4	16	30'	50	3,180
YG-4029015	EM890015	1.5	4	8	1°	45	3,010



unit:mm

RADIUS TOLERANCE	± 0.010
TAPER ANGLE TOLERANCE	± 5'
SHANK DIA. TOLERANCE	0 -0.008

YG ดอกเอ็นมิล X-POWER หัวบอล 4 ฟัน ตัวเตเปอร์ ยาวพิเศษ



R



R: $\pm 0.01\text{mm}$

SERIES EM890
PLAIN SHANK

Cutting Data ดูหน้า 148

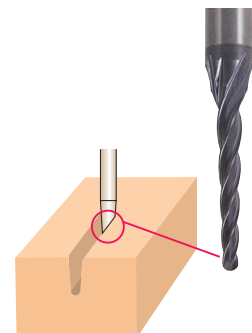


Unit: mm

รหัสสินค้า	EDP No.	MILL DIAMETER	SHANK DIAMETER h6	LENGTH OF CUT	TAPER ANGLE	OVERALL LENGTH	อัน / บาท
YG-4029953	EM890953	1.5	4	12	1°	45	3,010
YG-4029954	EM890954	1.5	4	16	1°	50	3,180
YG-4029956	EM890956	1.5	4	8	1°30'	45	3,590
YG-4029958	EM890958	1.5	4	12	1°30'	45	3,590
YG-4029959	EM890959	1.5	4	16	1°30'	50	3,790
YG-4029961	EM890961	1.5	4	8	2°	45	3,590
YG-4029963	EM890963	1.5	4	12	2°	45	3,590
YG-4029964	EM890964	1.5	4	16	2°	50	3,790
YG-4029816	EM890816	2.0	4	12	30'	45	2,780
YG-4029817	EM890817	2.0	4	16	30'	50	2,870
YG-4029825	EM890825	2.0	4	12	1°	45	2,780
YG-4029826	EM890826	2.0	4	16	1°	50	2,870
YG-4029830	EM890830	2.0	4	12	1°30'	45	3,310
YG-4029831	EM890831	2.0	4	16	1°30'	50	3,420
YG-4029835	EM890835	2.0	4	12	2°	45	3,310
YG-4029836	EM890836	2.0	4	16	2°	50	3,420

unit:mm

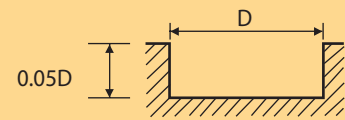
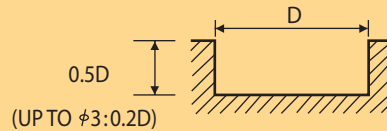
RADIUS TOLERANCE	± 0.010
TAPER ANGLE TOLERANCE	$\pm 5'$
SHANK DIA. TOLERANCE	0 -0.008



2 FLUTE, SHORT, SLOTTING

EM810

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~Hrc30		Hrc30 ~ Hrc45				Hrc45 ~ Hrc55		Hrc55 ~ Hrc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	11560	190	7560	120	6300	90	5040	35		
3	8920	210	5560	140	4620	120	3360	40	1900	40
4	7560	300	4620	180	3880	150	2940	40	1480	40
5	6300	320	3780	190	3160	160	2320	50	1260	40
6	5560	350	3360	220	2840	180	2000	55	1100	40
8	4200	380	2520	200	2100	180	1680	75	840	40
10	3260	330	2000	160	1680	160	1360	60	680	35
12	2740	280	1680	130	1360	130	1160	55	560	35
16	2200	220	1360	110	1060	110	900	40	440	20
20	1680	170	1060	80	840	80	680	30	320	20
25	1360	130	840	70	680	60	540	20	260	15

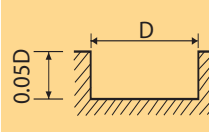
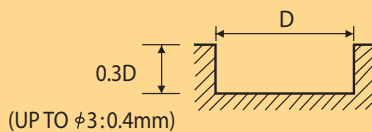


RPM=rev/min
Feed=mm/min

2 FLUTE, LONG, SLOTTING

EM816

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS	
HARDNESS	~Hrc30		Hrc30 ~ Hrc45		Hrc45 ~ Hrc55	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
2	6300	60	5040	50	3150	25
3	4410	70	3570	60	2200	30
4	3570	85	2840	70	1790	35
5	3050	105	2420	85	1580	40
6	2630	125	2100	105	1370	50
8	2000	135	1580	105	1050	50
10	1680	135	1370	105	840	50
12	1370	105	1160	95	700	40
16	1160	95	890	75	560	35
20	840	70	680	50	420	25

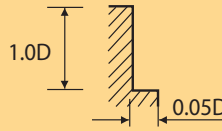


RPM=rev/min
Feed=mm/min

3 FLUTE, FINISH, SIDE CUTTING

EM895, EM836

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45				HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	11560	210	7560	140	6300	115	5040	30		
3	8920	240	5560	150	4620	125	3360	40	1900	45
4	7560	430	4620	260	3880	210	2940	45	1480	45
5	6300	450	3780	270	3160	230	2320	55	1260	45
6	5560	500	3360	310	2840	250	2000	60	1100	45
8	4200	530	2520	290	2100	265	1680	80	840	45
10	3260	460	2000	230	1680	230	1360	70	680	35
12	2740	390	1680	190	1360	180	1160	60	560	35
16	2200	310	1360	150	1060	150	900	45	440	20
18	1940	280	1210	135	950	130	790	35	320	20
20	1680	240	1060	120	840	115	680	30	260	20

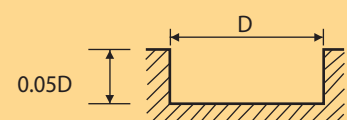
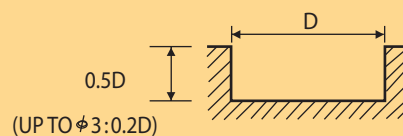


RPM=rev/min
Feed=mm/min

3 FLUTE, FINISH, SLOTTING

EM895, EM836

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45				HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	11560	170	7560	110	6300	80	5040	30		
3	8920	190	5560	130	4620	110	3360	35	1900	40
4	7560	270	4620	160	3880	130	2940	35	1480	35
5	6300	280	3780	170	3160	140	2320	45	1260	35
6	5560	310	3360	200	2840	160	2000	50	1100	35
8	4200	340	2520	180	2100	160	1680	65	840	35
10	3260	300	2000	140	1680	145	1360	55	680	30
12	2740	250	1680	120	1360	120	1160	50	560	30
16	2200	200	1360	100	1060	100	900	35	440	20
18	1940	175	1210	85	950	85	790	30	380	20
20	1680	150	1060	70	840	70	680	25	320	20

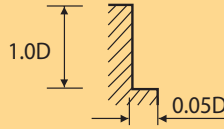


RPM=rev/min
Feed=mm/min

4 FLUTE, SHORT, SIDE CUTTING

EM811

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45				HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²				1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	11560	280	7560	170	6300	140	5040	50		
3	8920	320	5560	200	4620	170	3360	60	1900	60
4	7560	570	4620	350	3880	280	2940	60	1480	60
5	6300	600	3780	360	3160	300	2320	70	1260	60
6	5560	660	3360	410	2840	330	2000	80	1100	60
8	4200	710	2520	380	2100	350	1680	110	840	60
10	3260	610	2000	300	1680	300	1360	90	680	50
12	2740	520	1680	250	1360	240	1160	80	560	50
16	2200	410	1360	200	1100	200	900	60	440	30
20	1680	320	1060	160	840	150	680	40	320	30
25	1360	250	840	130	680	120	540	30	260	20

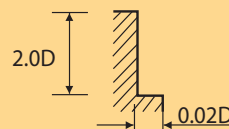
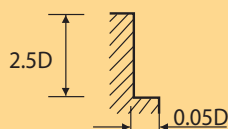


RPM=rev/min
Feed=mm/min

4 FLUTE, LONG, SIDE CUTTING

EM817

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45		HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	6300	100	5040	80	3150	45		
3	4410	115	3570	100	2200	55	1890	30
4	3570	140	2840	115	1790	60	1470	35
5	3050	180	2420	140	1580	70	1260	40
6	2630	215	2100	180	1370	90	1160	50
8	2000	230	1580	180	1050	90	840	50
10	1680	230	1370	180	840	90	670	50
12	1370	180	1160	160	700	70	560	40
16	1160	160	890	125	560	60	440	35
20	840	115	680	90	420	45	340	25

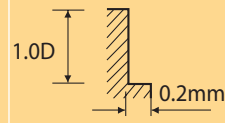
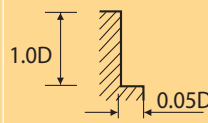
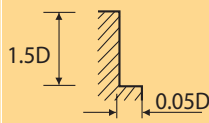
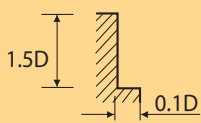


RPM=rev/min
Feed=mm/min

6&8 FLUTE, LONG, SIDE CUTTING

EM812

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc50		HRc50 ~ HRc60		HRc60 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1750N/mm ²		1750 ~ 2080N/mm ²		2080N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	5560	2000	3880	1370	1580	210	1100	130
8	4200	2000	2940	1370	1160	210	840	130
10	3360	2000	2320	1370	1000	210	680	130
12	2840	1680	2000	1160	840	180	560	110
16	2100	1260	1480	880	640	130	420	70
20	1680	1010	1160	690	500	110	320	60
25	1500	900	1100	600	430	90	260	50

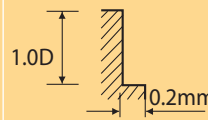
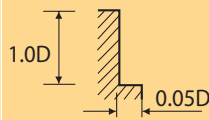
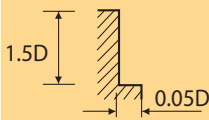


RPM=rev/min
Feed=mm/min

6&8 FLUTE, LONG, SIDE CUTTING

EM812 (HIGH SPEED CUTTING)

MATERIAL	HEAT RESISTANT STEELS HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc50		HRc50 ~ HRc60		HRc60 ~ HRc65	
STRENGTH	~1750N/mm ²		1750 ~ 2080N/mm ²		2080N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
6	16800	6090	8400	3050	4200	1470
8	12600	6090	6300	3050	3160	1470
10	9980	5990	5040	3050	2520	1470
12	8400	5040	4200	2520	2100	1260
16	6300	3780	3160	1890	1580	950
20	5040	3050	2520	1470	1260	760
25	4500	2700	2200	1300	1120	670

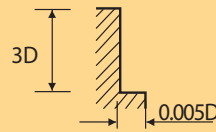
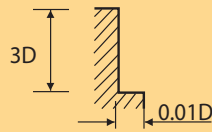


RPM=rev/min
Feed=mm/min

6 FLUTE, EXTRA LONG, SIDE CUTTING

EM834

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC40		HRC40 ~ HRC50		HRC50 ~ HRC60		HRC60 ~ HRC65	
STRENGTH	~1250N/mm ²		1250 ~ 1750N/mm ²		1750 ~ 2080N/mm ²		2080N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	2230	470	1670	350	1390	250	1110	200
8	1670	450	1250	330	1050	240	840	180
10	1330	440	1000	300	840	230	680	160
12	1110	400	840	270	690	210	560	150
16	840	330	630	230	530	170	420	130
20	670	280	500	200	420	150	320	120
25	540	240	400	170	340	130	270	95

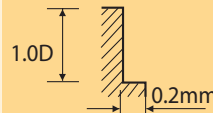
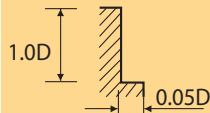
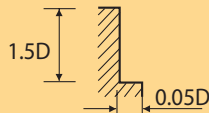


RPM=rev/min
Feed=mm/min

6 FLUTE, CORNER RADIUS, SIDE CUTTING

EM835 (HIGH SPEED CUTTING)

MATERIAL	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC50		HRC50 ~ HRC60		HRC60 ~ HRC65	
STRENGTH	~1750N/mm ²		1750 ~ 2080N/mm ²		2080N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
6	16800	6090	8400	3050	4200	1470
8	12600	6090	6300	3050	3150	1470
10	9980	5990	5040	3050	2520	1470
12	8400	5040	4200	2520	2100	1260
16	6300	3780	3150	1890	1580	950
20	5040	3050	2520	1470	1260	760

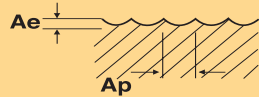


RPM=rev/min
Feed=mm/min

2 FLUTE, BALL NOSE

EM876, EM813, EM878

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc40		HRc45 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1250N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1	15760	250	12720	200	5800	90
1.5	15760	350	12140	270	5320	120
2	14400	750	10700	490	4680	150
2.5	14400	750	10700	490	4680	150
3	13100	680	10000	460	4520	150
4	10500	740	8400	530	4200	180
5	9140	820	7300	580	3680	180
6	7780	840	6300	630	3160	190
8	5260	950	4420	660	2100	190
10	4620	1020	3780	710	1780	190
12	3780	900	2940	660	1360	190
16	2740	920	2320	650	1160	190
20	2100	840	1900	630	840	190
Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.2 x D			Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.1 x D			

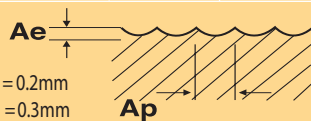


RPM=rev/min Feed=mm/min

2 FLUTE, BALL NOSE

EM876, EM813, EM878

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS	
HARDNESS	~HRc45		HRc45 ~ HRc55	
STRENGTH	~1500N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED
1	25000	650	25000	400
1.5	23000	700	23000	430
2	21000	740	21000	470
2.5	21000	880	19000	490
3	21000	1000	17000	520
4	21000	1470	13660	580
5	21000	1800	12000	600
6	21000	2310	10500	630
8	15760	2840	7880	740
10	13660	3050	6300	840
12	10500	2630	5260	840
16	8200	2630	3780	710
20	6300	2520	2940	530
Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.05 x D				

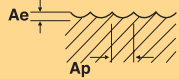
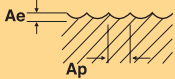
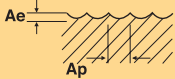


RPM=rev/min Feed=mm/min

(HIGH SPEED CUTTING)

2 FLUTE, BALL NOSE, MEDIUM LENGTH

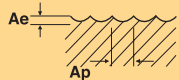
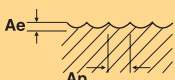
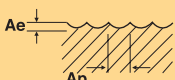
EM899

MATERIAL	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	HRC30~HRC40		HRC45 ~ HRC50		HRC50 ~ HRC55	
STRENGTH	1000~1250N/mm ²		1500 ~ 1750N/mm ²		1750~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1	127201	200	20000	460	20000	400
1.5	214010	270	16300	640	16100	580
2	70010	490	14500	800	14200	740
2.5	70010	490	13400	950	13000	890
3	000	460	12700	1100	12300	1050
4	8400	530	10600	1100	10300	1050
5	7300	580	9400	1100	9050	1050
6	6300	630	8600	1150	8250	1100
8	4420	660	7000	1050	6700	1000
10	3780	710	6050	1000	5800	960
12	2940	660	5450	1000	5200	960
16	2320	650	4350	870	4150	830
20	1900	630	3500	690	3300	650
 <p>Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.2 x D</p>		 <p>Ae: D1 ~ D4 = 0.05 x D D5 ~ D8 = 0.25mm D8 ~ D20 = 0.30mm Ap: 0.1 x D</p>				

RPM=rev/min Feed=mm/min

2 FLUTE, BALL NOSE, MEDIUM LENGTH

EM899 (HIGH SPEED CUTTING)

MATERIAL	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC45		HRC45 ~ HRC50		HRC50 ~ HRC55	
STRENGTH	~1500N/mm ²		1500 ~ 1750N/mm ²		1750~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1	25000	650	20000	770	20000	700
1.5	23000	700	16300	1050	16100	980
2	21000	740	14500	1300	14200	1230
2.5	21000	880	13400	1500	13000	1430
3	21000	1000	12700	1750	12300	1670
4	21000	1470	10600	1700	10300	1620
5	21000	1800	9400	1650	9050	1570
6	21000	2310	8600	1750	8250	1670
8	15760	2840	7000	1550	6700	1460
10	13660	3050	6050	1450	5800	1360
12	10500	2630	5450	1420	5200	1330
16	8200	2630	4350	1230	4150	1130
20	6300	2520	3500	1000	3300	900
 <p>Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.05 x D</p>		 <p>Ae: D1 ~ D4 = 0.05 x D D5 ~ D8 = 0.25mm D8 ~ D20 = 0.30mm Ap: D1 ~ D20 = 0.05 x D</p>				

RPM=rev/min Feed=mm/min

2 FLUTE, LONG REACH, BALL NOSE

EM838

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		
HARDNESS	~HRc30		HRc30 ~ HRc40		HRc45 ~ HRc65		
STRENGTH	~1000N/mm ²		1000 ~ 1250N/mm ²		1500N/mm ² ~		
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	
1	12600	200	10180	160	4640	70	
1.5	12600	280	9710	220	4250	95	
2	12600	420	9250	260	3870	90	
2.5	11520	600	8560	390	3740	120	
3	10500	540	8000	370	3620	120	
4	8400	590	6720	420	3360	140	
5	7310	660	5840	460	2940	140	
6	6220	670	5040	500	2530	150	
8	4210	760	3540	530	1680	150	
10	3700	820	3020	570	1420	150	
12	3020	720	2350	530	1090	150	
16	2190	740	1860	520	930	150	
20	1680	670	1520	500	670	150	
Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.2 x D						Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.1 x D	

RPM=rev/min Feed=mm/min

2 FLUTE, LONG REACH, BALL NOSE

EM838 (HIGH SPEED CUTTING)

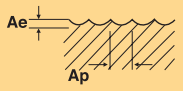
MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS	
HARDNESS	~HRc45		HRc45 ~ HRc65	
STRENGTH	~1500N/mm ²		1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED
1	20000	520	20000	320
1.5	18400	560	18400	340
2	16800	590	16800	380
2.5	16800	700	15200	390
3	16800	800	13600	420
4	16800	1180	10930	460
5	16800	1440	9600	480
6	16800	1850	8400	500
8	12610	2270	6300	590
10	10930	2440	5040	670
12	8400	2100	4210	670
16	6560	2100	3020	570
20	5040	2020	2350	420
Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.05 x D				

RPM=rev/min Feed=mm/min

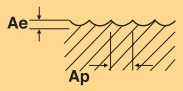
2 FLUTE, BALL NOSE WITH TAPER NECK

EM902

MATERIAL	ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	HRc30~HRc40		HRc40 ~ HRc50		HRc50 ~ HRc55	
STRENGTH	1000~1250N/mm ²		1250 ~ 1750N/mm ²		1750~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1	10180	160	16000	370	16000	320
2	9250	260	11500	640	11300	590
3	8000	370	10200	880	9800	850
4	6720	420	8500	880	8200	850
5	5840	460	7500	880	7200	850
6	5040	500	6900	920	6500	880
8	3540	530	5600	840	5300	800
10	3020	570	4850	800	4650	770
12	2350	530	4350	800	4150	770



Ae: D1 ~ D6 = 0.2mm
D8 ~ D12 = 0.3mm
Ap: 0.2 x D



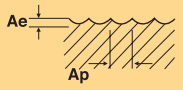
Ae: D1 ~ D4 = 0.05 x D
D5 ~ D8 = 0.25mm
D8 ~ D12 = 0.30mm
Ap: 0.1 x D

RPM=rev/min Feed=mm/min

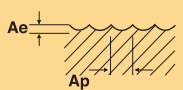
2 FLUTE, BALL NOSE WITH TAPER NECK

EM902 (HIGH SPEED CUTTING)

MATERIAL	NON-ALLOY STEELS ALLOY STEELS CAST IRON		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc45		HRc45 ~ HRc50		HRc50 ~ HRc55	
STRENGTH	~1500N/mm ²		1250 ~ 1750N/mm ²		1750~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED
1	20000	520	16000	620	16000	550
2	16800	590	11500	850	11400	980
3	16800	800	10200	1400	9800	1300
4	16800	1180	8500	1350	8200	1300
5	16800	1440	7500	1320	7200	1250
6	16800	1850	6900	1400	6600	1350
8	12610	2270	5600	1250	5300	1150
10	10930	2440	4800	1150	4600	1100
12	8400	2100	4350	1130	4150	1050



Ae: D1 ~ D6 = 0.2mm
D8 ~ D12 = 0.3mm
Ap: 0.05 x D



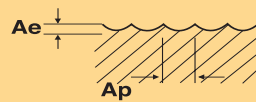
Ae: D1 ~ D4 = 0.05 x D
D5 ~ D8 = 0.25mm
D10 ~ D20 = 0.30mm
Ap: 0.05 x D

RPM=rev/min Feed=mm/min

4 FLUTE, LONG, BALL NOSE

EM815

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		
HARDNESS	~HRc30		HRc30 ~ HRc40		HRc45 ~ HRc65		
STRENGTH	~1000N/mm ²		1000 ~ 1250N/mm ²		1500N/mm ² ~		
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	
1	15760	380	12720	300	5800	130	
1.5	15760	530	12140	410	5320	180	
2	15760	800	11560	480	4840	160	
3	13100	1020	10000	690	4520	220	
4	10500	1110	8400	800	4200	270	
5	9140	1230	7300	870	3680	270	
6	7780	1260	6300	950	3160	280	
8	5260	1430	4420	990	2100	280	
10	4620	1530	3780	1070	1780	280	
12	3780	1350	2940	990	1360	280	
16	2740	1380	2320	980	1160	280	
20	2100	1260	1900	950	840	280	
		Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.2 x D				Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.1 x D	

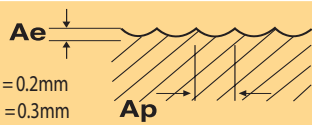


RPM=rev/min Feed=mm/min

4 FLUTE, LONG, BALL NOSE

EM815 (HIGH SPEED CUTTING)

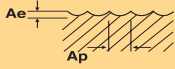
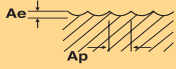
MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS		
HARDNESS	~HRc45		HRc45 ~ HRc65		
STRENGTH	~1500N/mm ²		1500N/mm ² ~		
DIAMETER	RPM	FEED	RPM	FEED	
1	25000	980	25000	600	
1.5	23000	1050	23000	640	
2	21000	1110	21000	700	
3	21000	1500	17000	780	
4	21000	2210	13660	870	
5	21000	2700	12000	900	
6	21000	3470	10500	940	
8	15760	4260	7880	1110	
10	13660	4580	6300	1260	
12	10500	3950	5260	1260	
16	8200	3950	3780	1060	
20	6300	3780	2940	790	
		Ae: D1 ~ D6 = 0.2mm D8 ~ D20 = 0.3mm Ap: 0.05 x D			



RPM=rev/min Feed=mm/min

2 FLUTE, MINIATURE BALL NOSE

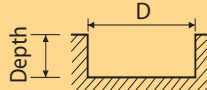
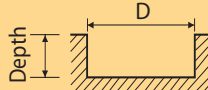
EM865

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS	
HARDNESS	HRc30 ~ HRc45		HRc45 ~ HRc55	
STRENGTH	1000~1500N/mm ²		1500~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED
0.6	30000	600	30000	300
0.8	27000	650	27000	380
1	25000	650	25000	400
1.2	24000	670	24000	410
1.5	23000	700	23000	430
	 <p> $D < 1$ $Ae = 0.05 \times D$ $A_p = 0.15 \times D$ $D \geq 1$ $Ae = 0.075 \times D$ $A_p = 0.15 \times D$ </p>		 <p> $D < 1$ $Ae = 0.05 \times D$ $A_p = 0.1 \times D$ $D \geq 1$ $Ae = 0.05 \times D$ $A_p = 0.15 \times D$ </p>	

RPM=rev/min
Feed=mm/min

2 FLUTE, MINIATURE, SLOTTING

EM810

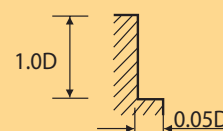
MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		HARDENED STEELS	
HARDNESS	HRc30 ~ HRc45		HRc45 ~ HRc55	
STRENGTH	1000~1500N/mm ²		1500~2000N/mm ²	
DIAMETER	RPM	FEED	RPM	FEED
0.4	30000	180	23000	100
0.8	24000	300	18000	130
1	20000	320	15000	150
1.2	16000	320	12000	150
1.5	12000	300	9000	140
	 <p> $D < 1$ Depth=0.15 x D $D \geq 1$ Depth=0.25 x D </p>		 <p> $D < 1$ Depth=0.02 x D $D \geq 1$ Depth=0.05 x D </p>	

RPM=rev/min
Feed=mm/min

MULTI.FLUTE, ROUGHING, SIDE CUTTING

EM832, EM814

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		ALLOY STEELS STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC30		HRC30 ~ HRC38		HRC38 ~ HRC45		HRC45 ~ HRC55		HRC55 ~ HRC65	
STRENGTH	~1000N/mm ²		1000 ~ 1200N/mm ²		1200 ~ 1400N/mm ²		1400 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	15600	2320	12400	840	8400	570	3400	260	2400	190
8	11600	2320	9200	840	6300	570	2400	240	1800	180
10	9200	2320	7600	840	5100	570	2000	290	1300	190
12	8000	2400	6000	800	4200	570	1680	260	1200	190
14	6800	2400	5200	840	3600	570	1400	200	900	130
16	6000	2400	4800	760	3300	510	1200	160	800	110
18	5200	2320	4400	720	2700	420	1100	150	700	100
20	4800	2160	3600	560	2400	360	1000	150	660	100
25	4300	2150	3200	620	2160	410	900	160	600	100

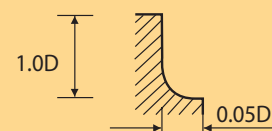


RPM=rev/min
Feed=mm/min

3,4 FLUTE, ROUGHING BALL NOSE, SIDE CUTTING

EM833

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		ALLOY STEELS STAINLESS STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC30		HRC30 ~ HRC38		HRC38 ~ HRC45		HRC45 ~ HRC55		HRC55 ~ HRC65	
STRENGTH	~1000N/mm ²		1000 ~ 1200N/mm ²		1200 ~ 1400N/mm ²		1400 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	15600	2320	12400	840	8400	570	3400	260	2400	190
8	11600	2320	9200	840	6300	570	2400	240	1800	180
10	9200	2320	7600	840	5100	570	2000	290	1300	190
12	8000	2400	6000	800	4200	570	1680	260	1200	190
14	6800	2400	5200	840	3600	570	1400	200	900	130
16	6000	2400	4800	760	3300	510	1200	160	800	110
18	5200	2320	4400	720	2700	420	1100	150	700	100
20	4800	2160	3600	560	2400	360	1000	150	660	100

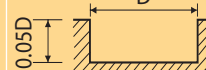
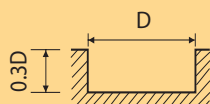


RPM=rev/min
Feed=mm/min

2 FLUTE, CORNER RADIUS, LONG, SLOTTING

EM818

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45		HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	4410	70	3570	60	2200	30	1870	18
4	3570	85	2840	70	1790	35	1470	20
5	3050	105	2420	85	1580	40	1260	25
6	2630	125	2100	105	1370	50	1160	35
8	2000	135	1580	105	1050	50	840	35
10	1680	135	1370	105	840	50	670	35
12	1370	105	1160	95	700	40	550	25
16	1160	95	890	75	560	35	440	20
20	840	70	680	50	420	25	340	15

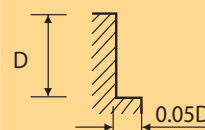
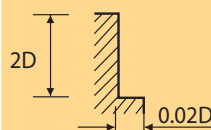
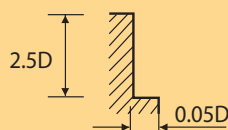


RPM=rev/min
Feed=mm/min

4 FLUTE, CORNER RADIUS, LONG, SIDE CUTTING

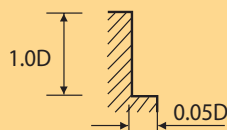
EM819

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45		HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
3	4410	115	3570	100	2200	55	1870	30
4	3570	140	2840	115	1790	60	1470	35
5	3050	180	2420	140	1580	70	1260	40
6	2630	215	2100	180	1370	85	1160	50
8	2000	230	1580	180	1050	85	840	50
10	1680	230	1370	180	840	85	670	50
12	1370	180	1160	160	700	70	550	40
16	1160	160	890	125	560	60	440	35
20	840	115	680	90	420	45	340	25



RPM=rev/min
Feed=mm/min

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRC30		HRC30 ~ HRC45		HRC45 ~ HRC55		HRC55 ~ HRC65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	6670	790	4030	490	2400	95	1320	70
8	5040	850	3020	455	2020	130	1010	70
10	3910	730	2400	360	1630	110	820	60
12	3290	625	2020	300	1390	95	670	60
16	2640	490	1630	240	1080	70	530	35

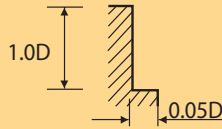


RPM=rev/min
Feed=mm/min

4 FLUTE, CORNER RADIUS, STUB CUT, SIDE CUTTING

EM839

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON		ALLOY STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45		HRc45 ~ HRc55		HRc55 ~ HRc65	
STRENGTH	~1000N/mm ²		1000 ~ 1500N/mm ²		1500 ~ 2000N/mm ²		2000N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
2	13870	340	9070	205	6050	60		
2.5	12290	360	7870	220	5040	65		
3	10700	385	6670	240	4030	70	2280	70
3.5	9890	535	6100	330	3780	70	2030	70
4	9070	685	5540	420	3530	70	1780	70
5	7560	720	4540	430	2780	85	1510	70
6	6670	790	4030	490	2400	95	1320	70
8	5040	850	3020	455	2020	130	1010	70
10	3910	730	2400	360	1630	110	820	60
12	3290	625	2020	300	1390	95	670	60
16	2640	490	1630	240	1080	70	530	35

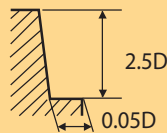


RPM=rev/min
Feed=mm/min

2 FLUTE, TAPER, SIDE CUTTING

EM837

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS		ALLOY STEELS HEAT RESISTANT STEELS	
HARDNESS	~HRc30		HRc30 ~ HRc45	
STRENGTH	~1000N/mm ²		1000~1500N/mm ² ~	
DIAMETER	RPM	FEED	RPM	FEED
2	8400	170	6300	125
3	4410	120	3570	100
4	3570	140	2840	115
5	3050	180	2410	145
6	2630	210	2100	170
8	2000	250	1580	180



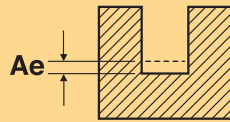
RPM=rev/min
Feed=mm/min

2 FLUTE for RIB PROCESSING

EM883

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON			ALLOY STEELS HEAT RESISTANT STEELS			HARDENED STEELS		
HARDNESS	~HRc30			HRc30 ~ HRc45			HRc45 ~ HRc55		
STRENGTH	~1000N/mm ²			1000 ~ 1500N/mm ²			1500 ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)
0.8	27000~35000	190~420	0.014~0.035	19500~24500	60~240	0.014~0.035	12500~14800	35~95	0.007~0.015
1	22500~28000	190~540	0.045~0.090	15700~20000	95~300	0.045~0.090	10000~12500	50~100	0.009~0.018
1.2	18500~23500	190~600	0.055~0.100	13000~16500	95~300	0.055~0.100	8300~10500	50~100	0.010~0.022
1.4	16000~20000	190~600	0.062~0.125	11500~14000	95~300	0.062~0.125	7200~9000	50~100	0.012~0.025
1.5	14500~18500	190~600	0.070~0.135	10500~13500	95~300	0.070~0.135	6700~8200	50~100	0.014~0.028
1.6	14000~18000	190~600	0.075~0.145	10200~12800	95~300	0.075~0.145	6400~8000	50~100	0.015~0.030
1.8	13000~16500	190~600	0.080~0.160	9200~11500	95~300	0.080~0.160	5700~7200	50~100	0.016~0.032
2	12000~14500	190~600	0.090~0.180	8300~10500	95~300	0.090~0.180	5300~6600	50~100	0.018~0.035
2.5	9500~12000	190~600	0.112~0.235	6700~8500	95~300	0.112~0.235	4300~5300	50~100	0.022~0.045
3	8000~10000	190~600	0.135~0.270	5500~7000	95~300	0.135~0.270	3500~4400	50~100	0.028~0.055

(Depth of Cut per one pass)



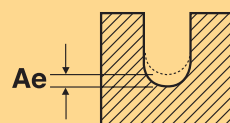
RPM=rev/min
Feed=mm/min

2 FLUTE, BALL NOSE for RIB PROCESSING

EM886

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON			ALLOY STEELS HEAT RESISTANT STEELS			HARDENED STEELS		
HARDNESS	~HRc30			HRc30 ~ HRc45			HRc45 ~ HRc55		
STRENGTH	~1000N/mm ²			1000 ~ 1500N/mm ²			1500 ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)
0.6	30000~40000	400~600	0.010~0.020	25000~30000	100~300	0.010~0.020	13000~16500	25~60	0.005~0.010
0.8	27000~35000	190~420	0.014~0.035	19500~24500	60~240	0.014~0.035	12500~14800	35~95	0.007~0.015
1	22500~28000	190~540	0.045~0.090	15700~20000	95~300	0.045~0.090	10000~12500	50~100	0.009~0.018
1.2	18500~23500	190~600	0.055~0.100	13000~16500	95~300	0.055~0.100	8300~10500	50~100	0.010~0.022
1.4	16000~20000	190~600	0.062~0.125	11500~14000	95~300	0.062~0.125	7200~9000	50~100	0.012~0.025
1.5	14500~18500	190~600	0.070~0.135	10500~13500	95~300	0.070~0.135	6700~8200	50~100	0.014~0.028
1.6	14000~18000	190~600	0.075~0.145	10200~12800	95~300	0.075~0.145	6400~8000	50~100	0.015~0.030
1.8	13000~16500	190~600	0.080~0.160	9200~11500	95~300	0.080~0.160	5700~7200	50~100	0.016~0.032
2	12000~14500	190~600	0.090~0.180	8300~10500	95~300	0.090~0.180	5300~6600	50~100	0.018~0.035
3	8000~10000	190~600	0.135~0.270	5500~7000	95~300	0.135~0.270	3500~4400	50~100	0.028~0.055
4	6500~8500	190~600	0.180~0.360	4500~6000	95~300	0.180~0.360	3000~3800	50~100	0.035~0.070

(Depth of Cut per one pass)



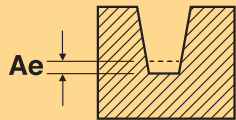
RPM=rev/min
Feed=mm/min

4 FLUTE, TAPER for RIB PROCESSING

EM889

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON			ALLOY STEELS HEAT RESISTANT STEELS			HARDENED STEELS		
HARDNESS	~HRC30			HRC30 ~ HRC45			HRC45 ~ HRC55		
STRENGTH	~1000N/mm ²			1000 ~ 1500N/mm ²			1500 ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)
1	20000	700	0.020~0.040	15000	500	0.020~0.030	10000	300	0.010~0.020
1.2	16000	700	0.025~0.050	13000	500	0.025~0.040	8000	300	0.012~0.025
1.5	13000	700	0.030~0.060	10000	500	0.030~0.050	6500	300	0.015~0.030
2	10000	700	0.040~0.080	8000	500	0.040~0.060	5000	300	0.020~0.040

(Depth of Cut per one pass)



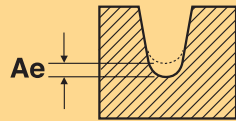
RPM=rev/min
Feed=mm/min

4 FLUTE, TAPER BALL NOSE for RIB PROCESSING

EM890

MATERIAL	NON-ALLOYED STEELS ALLOY STEELS CAST IRON			ALLOY STEELS HEAT RESISTANT STEELS			HARDENED STEELS		
HARDNESS	~HRC30			HRC30 ~ HRC45			HRC45 ~ HRC55		
STRENGTH	~1000N/mm ²			1000 ~ 1500N/mm ²			1500 ~ 2000N/mm ²		
DIAMETER	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)	RPM	FEED	Ae(mm)
1	20000	700	0.020~0.040	15000	500	0.020~0.030	10000	300	0.010~0.020
1.2	16000	700	0.025~0.050	13000	500	0.025~0.040	8000	300	0.012~0.025
1.5	13000	700	0.030~0.060	10000	500	0.030~0.050	6500	300	0.015~0.030
2	10000	700	0.040~0.080	8000	500	0.040~0.060	5000	300	0.020~0.040

(Depth of Cut per one pass)



RPM=rev/min
Feed=mm/min

X5070 END MILLS

for Machining High Hardened Steel

สำหรับเหล็กแข็งถึง 70 HRc

for High Speed Cutting & Dry Cutting

สำหรับงานกัดแห้ง

for Mold & Die

สำหรับงานโมลด์





X5070

END MILLS

CONTENTS

G8A36



ดอกเอ็นมิล X-5070 2 ฟัน STUB มีคอ
2 FLUTE, STUB CUT LENGTH with EXTENDED NECK

P. 151

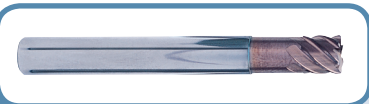
G8A37



ดอกเอ็นมิล X-5070 4 ฟัน STUB มีคอ
4 FLUTE, STUB CUT LENGTH with EXTENDED NECK

P. 152

G8A39



ดอกเอ็นมิล X-5070 6 ฟัน มุม R
6 FLUTE, 45° HELIX, with CORNER RADIUS

P. 153

G8A38



ดอกเอ็นมิล X-5070 2 ฟัน หัวบอล STUB มีคอ
2 FLUTE, STUB LENGTH BALL NOSE with EXTENDED NECK

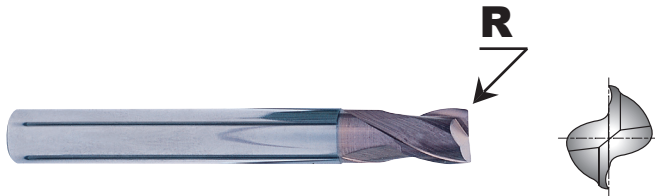
P. 154

SPEED & FEED DATA

P. 155

X-5070 Material Selection

Carbon Steel	Alloy Steel Tool Steel	Pre-hardened Steel	Hardened Steel				Cast Iron	Stainless Steel	Aluminium	Titanium Alloy	Copper Alloy	Graphite
			~40 HRc	~50 HRc	~60 HRc	60 HRc~						
◎	◎	◎	◎	◎	◎	○	◎	○	○	○	◎	○

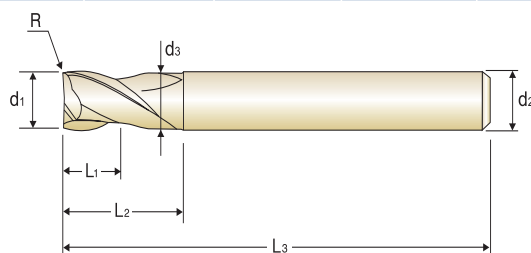
X5070**YG ดอกเอ็นมิล X-5070 2 ฟัน STUB มีคอ****2 FLUTE, STUB CUT LENGTH with EXTENDED NECK****SERIES G8A36****PLAIN SHANK****MG
HM****FLUTE
2****PLAIN**Cutting Data
หน้า 155&156

- Designed to machine high hardened materials.
ออกแบบมาเพื่อเหล็กแข็ง HRc 50-70 โดยเฉพาะ
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
เหมาะสำหรับ Dry Cutting และ High Speed Cutting
- Excellent workpiece finishes.
ผิวชิ้นงานเรียบสวย
- Deep slotting is possible by reduced neck.
สามารถกัดร่องลึกได้ ด้วยการลดขนาดคอ
- Corner radius for preventing the chipping in high speed machining.
มีมุม R เพื่อป้องกันเศษกระเด็น
- Higher wear-resistance.
ต้านทานการสึกหรอสูง

Unit : mm

รหัสสินค้า	EDP No.	CORNER RADIUS R	MILL	SHANK	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK	อัน / บาท
YG-5001003	G8A36003	-	0.3	3	0.45	-	40	-	2,450
YG-5001004	G8A36004	-	0.4	3	0.6	-	40	-	2,160
YG-5001005	G8A36005	0.05	0.5	3	0.7	-	40	-	1,870
YG-5001006	G8A36006	0.05	0.6	3	0.9	-	40	-	1,760
YG-5001008	G8A36008	0.05	0.8	3	1.2	-	40	-	1,580
YG-5001010	G8A36010	0.1	1	3	1.5	-	40	-	1,530
YG-5001901	G8A36901	0.1	1	4	1.5	-	40	-	1,530
YG-5001015	G8A36015	0.1	1.5	3	2.2	-	40	-	1,530
YG-5001020	G8A36020	0.1	2	3	3	6	40	1.9	1,390
YG-5001902	G8A36902	0.1	2	4	3	6	40	1.9	•
YG-5001025	G8A36025	0.1	2.5	3	4	6	40	2.4	1,390
YG-5001030	G8A36030	0.1	3	6	4	7	45	2.9	2,030
YG-5001035	G8A36035	0.1	3.5	6	5	9	45	3.3	2,030
YG-5001040	G8A36040	0.1	4	6	5	9	45	3.8	2,030
YG-5001045	G8A36045	0.1	4.5	6	6	10	45	4.3	2,030
YG-5001050	G8A36050	0.2	5	6	6	11	50	4.8	2,030
YG-5001060	G8A36060	0.2	6	6	7	14	50	5.8	2,030
YG-5001080	G8A36080	0.2	8	8	9	18	60	7.8	2,580
YG-5001100	G8A36100	0.2	10	10	12	25	75	9.7	3,850
YG-5001120	G8A36120	0.3	12	12	15	30	75	11.7	5,350
YG-5001160	G8A36160	0.3	16	16	18	38	90	15.7	8,900
YG-5001200	G8A36200	0.3	20	20	24	45	100	19.7	14,700

MILL DIA. TOLERANCE(mm)		SHANK DIA. TOLERANCE
DIAMETER	TOLERANCE	
up to 5	0 ~ -0.012	h6
from 6 ~	0 ~ -0.030	



• Order

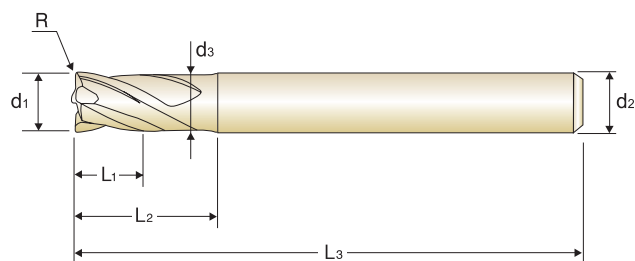
X5070**YG ดอกเอ็นมิล X-5070 4 ฟัน STUB มีคอ****4 FLUTE, STUB CUT LENGTH with EXTENDED NECK****SERIES G8A37****PLAIN SHANK****MG
HM****FLUTE
4****PLAIN**Cutting Data
หน้า 157

- Designed to machine high hardened materials.
ออกแบบมาเพื่อเหล็กแข็ง HRc 50-70 โดยเฉพาะ
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
เหมาะสำหรับ Dry Cutting และ High Speed Cutting
- Excellent workpiece finishes.
ผิวชิ้นงานเรียบสวย
- Deep slotting is possible by reduced neck.
สามารถกัดร่องลึกได้ ด้วยการลดขนาดคอ
- Corner radius for preventing the chipping in high speed machining.
มีมุม R เพื่อป้องกันเศษกระเด็น
- Higher wear-resistance.
ต้านทานการสึกหรอสูง

Unit : mm

รหัสสินค้า	EDP No.	CORNER RADIUS R	MILL	SHANK	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK	อื่น / บาท
YG-5002010	G8A37010	0.1	1	3	1.5	-	40	-	1,530
YG-5002015	G8A37015	0.1	1.5	3	2.2	-	40	-	1,530
YG-5002020	G8A37020	0.1	2	3	3	6	40	1.9	1,390
YG-5002025	G8A37025	0.1	2.5	3	4	6	40	2.4	1,390
YG-5002030	G8A37030	0.1	3	6	4	7	45	2.9	2,030
YG-5002035	G8A37035	0.1	3.5	6	5	9	45	3.3	2,030
YG-5002040	G8A37040	0.1	4	6	5	9	45	3.8	2,030
YG-5002045	G8A37045	0.1	4.5	6	6	10	45	4.3	2,030
YG-5002050	G8A37050	0.2	5	6	6	11	50	4.8	2,030
YG-5002060	G8A37060	0.2	6	6	7	14	50	5.8	2,030
YG-5002080	G8A37080	0.2	8	8	9	18	60	7.8	2,580
YG-5002100	G8A37100	0.2	10	10	12	25	75	9.7	3,850
YG-5002120	G8A37120	0.3	12	12	15	30	75	11.7	5,350
YG-5002160	G8A37160	0.3	16	16	18	38	90	15.7	8,900
YG-5002200	G8A37200	0.3	20	20	24	45	100	19.7	14,700

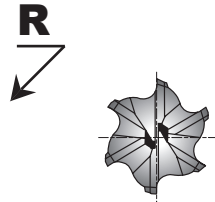
MILL DIA. TOLERANCE(mm)		SHANK DIA. TOLERANCE
DIAMETER	TOLERANCE	
from 1 to 5	0~-0.012	h6
from 6 ~	0~-0.030	



X5070

YG ดอกเอ็นมิล X-5070 6 ฟัน มุม R

6 FLUTE, 45° with CORNER RADIUS END MILLS

SERIES G8A39**PLAIN SHANK****MG
HM****FLUTE
6**Cutting Data
หน้า 158

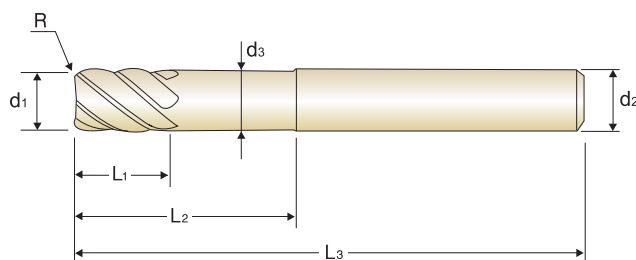
- Designed to machine high hardened materials.
ออกแบบมาเพื่อเหล็กแข็ง HRc 50-70 โดยเฉพาะ
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
เหมาะสำหรับ Dry Cutting และ High Speed Cutting
- Excellent workpiece finishes.
ผิวชิ้นงานเรียบสวย
- Deep slotting is possible by reduced neck.
สามารถกัดร่องลึกได้ ด้วยการลดขนาดคอ
- Corner radius for preventing the chipping in high speed machining.
มีมุม R เพื่อป้องกันเศษกระเด็น
- Higher wear-resistance.
ต้านทานการสึกหรอสูง

Unit : mm

รหัสสินค้า	EDP No.	CORNER RADIUS R	MILL	SHANK	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK	อัน / บาท
YG-5003060	G8A39060	0.5	6	6	6	14	50	5.7	2,920
YG-5003080	G8A39080	0.5	8	8	8	24	60	7.65	3,480
YG-5003100	G8A39100	1.0	10	10	10	30	70	9.65	5,430
YG-5003120	G8A39120	1.0	12	12	12	30	75	11.6	6,490
YG-5003901	G8A39901	0.5	6	6	13	-	70	-	3,310
YG-5003910	G8A39910	0.5	6	6	26	-	70	-	•
YG-5003902	G8A39902	0.5	8	8	19	-	90	-	4,150
YG-5003911	G8A39911	0.5	8	8	36	-	90	-	•
YG-5003903	G8A39903	0.5	10	10	22	-	100	-	6,260
YG-5003904	G8A39904	1.0	10	10	22	-	100	-	6,260
YG-5003912	G8A39912	1.0	10	10	46	-	100	-	•
YG-5003905	G8A39905	0.5	12	12	26	-	110	-	8,550
YG-5003906	G8A39906	1.0	12	12	26	-	110	-	8,550
YG-5003913	G8A39913	1.0	12	12	56	-	110	-	•
YG-5003160	G8A39160	1.0	16	16	32	-	130	-	14,500
YG-5003907	G8A39907	1.5	16	16	32	-	130	-	15,800
YG-5003914	G8A39914	1.5	16	16	66	-	130	-	•
YG-5003200	G8A39200	1.0	20	20	38	-	140	-	21,200
YG-5003908	G8A39908	1.5	20	20	38	-	140	-	23,100
YG-5003909	G8A39909	2.0	20	20	38	-	140	-	23,100
YG-5003915	G8A39915	2.0	20	20	76	-	140	-	•

Tolerances according to DIN 7160 & 7161

Tolerance range in mm					
Nominal-Diameter in mm					
	from 1 to 3	over 3 to 6	over 6 to 10	over 10 to 18	over 18 to 30
e8	-0.014 -0.028	-0.020 -0.038	-0.025 -0.047	-0.032 -0.059	-0.040 -0.073
h6	0 -0.006	0 -0.008	0 -0.009	0 -0.011	0 -0.013



• Order

X5070

YG ดอกเอ็นมิล X-5070 2 ฟัน หัวบอล STUB มีคอ

2 FLUTE, STUB CUT LENGTH BALL NOSE with EXTENDED NECK

SERIES G8A38

PLAIN SHANK

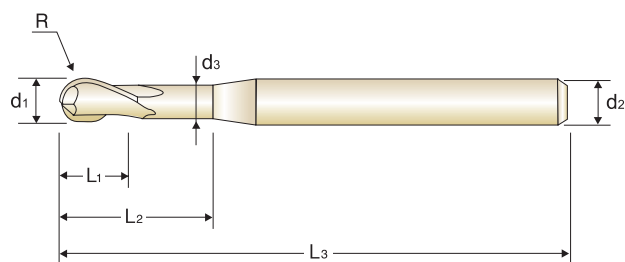
**MG
HM****FLUTE
2****PLAIN**Cutting Data
หน้า 157

- Designed to machine high hardened materials.
ออกแบบมาเพื่อเหล็กแข็ง HRc 50-70 โดยเฉพาะ
- Suitable for dry cutting, high speed cutting thanks to newly developed raw-material and new coating.
เหมาะสำหรับ Dry Cutting และ High Speed Cutting
- Excellent workpiece finishes.
ผิวชิ้นงานเรียบสวย
- Deep slotting is possible by reduced neck.
สามารถกัดร่องลึกได้ ด้วยการลดขนาดคอ
- Designed for high precision milling operation
ออกแบบสำหรับงาน milling ที่ต้องการความเที่ยงตรงสูง
- Higher wear-resistance.
ต้านทานการสึกหรอสูง

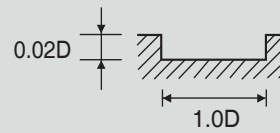
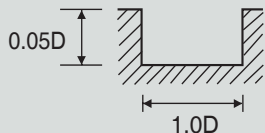
Unit : mm

รหัสสินค้า	EDP No.	R ± 0.01	MILL	SHANK	LENGTH OF CUT L ₁	LENGTH BELOW SHANK L ₂	OVERALL LENGTH L ₃	NECK	อื่น / บาท
YG-5004010	G8A38010	0.5	1	4	1	2.2	50	0.95	2,530
YG-5004012	G8A38012	0.6	1.2	4	1.2	2.6	50	1.1	2,530
YG-5004015	G8A38015	0.75	1.5	4	1.5	3.0	50	1.4	2,530
YG-5004020	G8A38020	1.0	2	6	2	4.0	50	1.9	2,410
YG-5004030	G8A38030	1.5	3	6	3	6.0	60	2.9	2,410
YG-5004040	G8A38040	2.0	4	6	4	8.0	70	3.9	2,410
YG-5004050	G8A38050	2.5	5	6	5	10.0	80	4.9	2,590
YG-5004060	G8A38060	3.0	6	6	6	12.0	90	5.9	2,780
YG-5004070	G8A38070	3.5	7	8	7	14.0	90	6.9	4,390
YG-5004080	G8A38080	4.0	8	8	8	16.0	100	7.9	4,390
YG-5004090	G8A38090	4.5	9	10	9	18.0	100	8.9	7,160
YG-5004100	G8A38100	5.0	10	10	10	20.0	100	9.9	7,160
YG-5004120	G8A38120	6.0	12	12	12	24.0	110	11.9	9,200
YG-5004140	G8A38140	7.0	14	14	14	28.0	110	13.8	11,700
YG-5004160	G8A38160	8.0	16	16	16	32.0	140	15.8	15,400
YG-5004180	G8A38180	9.0	18	18	18	36.0	140	17.8	16,600
YG-5004200	G8A38200	10.0	20	20	20	40.0	160	19.8	23,600
YG-5004250	G8A38250	12.5	25	25	25	50.0	180	24.8	38,200

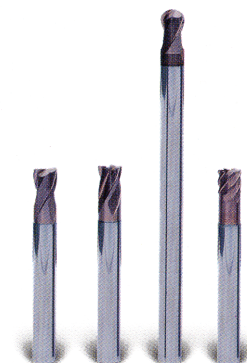
MILL DIA. TOLERANCE(mm)	SHANK DIA. TOLERANCE
0 -0.030	h6



MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HRc 30 ~ HRc 40		HRc 40 ~ HRc 50		HRc 50 ~ HRc 55		HRc 55 ~ HRc 60		HRc 60 ~ HRc 65	
HARDNESS	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
0.3	50000	190	45000	140	40000	115	33000	70	25000	40
0.4	50000	235	45000	180	40000	140	33000	90	25000	55
0.5	50000	370	45000	280	40000	220	33000	140	25000	85
0.6	50000	470	45000	360	40000	285	30000	160	25000	105
0.8	50000	600	40000	440	30000	295	25000	185	19000	110
1.0	48000	750	38000	570	25500	360	20500	215	16000	135
1.2	42000	790	34000	640	22500	380	20000	250	14500	145
1.5	37000	800	30500	670	21000	410	17000	250	13000	155
2.0	33300	850	26000	680	17500	420	14500	260	11000	160

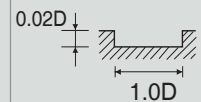
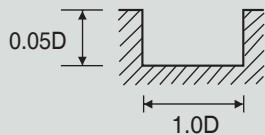


RPM = REVOLUTION PER MIN.
FEED = mm/min.



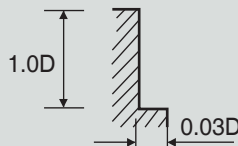
X5070
END MILLS

MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS	
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	48000	750	38000	570	25500	360	20500	215	16000	135	12500	85
2	33300	850	26000	680	17500	420	14500	260	11000	160	9500	115
3	21800	850	17300	680	11500	420	9500	260	7500	160	6400	115
4	16700	880	13200	700	8800	440	7200	270	5600	170	4750	118
5	15700	1000	12500	805	8300	500	6400	285	5100	180	4450	132
6	13100	950	10350	770	6900	480	5300	280	4200	180	3700	130
8	9880	930	7800	720	5200	445	4000	255	3200	165	2800	120
10	7800	850	6150	680	4100	415	3200	240	2550	155	2200	112
12	6650	850	5250	680	3500	415	2650	240	2100	155	1860	112
16	4900	730	3900	580	2600	365	2000	210	1600	135	1400	95
20	3900	660	3100	525	2050	335	1600	195	1300	125	1100	85



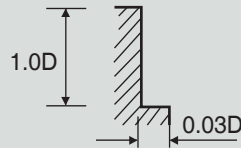
RPM = REVOLUTION PER MIN.
FEED = mm/min.

MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS	
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	48000	1050	38000	820	25500	510	20500	310	16000	190	12500	125
2	33300	1200	26000	970	17500	600	14500	370	11000	230	9500	165
3	21800	1200	17300	970	11500	600	9500	370	7500	230	6400	165
4	16700	1250	13200	1000	8800	625	7200	385	5600	240	4750	170
5	15700	1450	12500	1150	8300	710	6400	410	5100	260	4450	190
6	13100	1350	10350	1100	6900	690	5300	400	4200	255	3700	185
8	9880	1320	7800	1030	5200	635	4000	365	3200	235	2800	170
10	7800	1200	6150	970	4100	590	3200	340	2550	220	2200	160
12	6650	1200	5250	970	3500	590	2650	340	2100	220	1860	160
16	4900	1050	3900	840	2600	520	2000	300	1600	190	1400	140
20	3900	950	3100	750	2050	475	1600	275	1300	175	1100	125



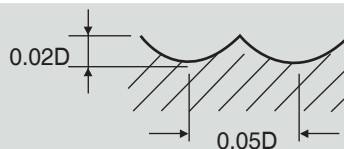
RPM = REVOLUTION PER MIN.
FEED = mm/min.

MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS	
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	48000	1480	38000	1050	25500	710	20500	430	16000	270	12500	175
2	33300	1750	26000	1250	17500	840	14500	520	11000	320	9500	230
3	21800	1750	17300	1250	11500	840	9500	520	7500	320	6400	230
4	16700	1800	13200	1300	8800	880	7200	540	5600	335	4750	240
5	15700	2000	12500	1500	8300	1000	6400	580	5100	370	4450	270
6	13100	1950	10350	1400	6900	950	5300	560	4200	350	3700	260
8	9880	1880	7800	1350	5200	900	4000	520	3200	330	2800	240
10	7800	1750	6150	1260	4100	840	3200	480	2550	310	2200	220
12	6650	1750	5250	1260	3500	840	2650	480	2100	300	1860	220
16	4900	1500	3900	1100	2600	730	2000	420	1600	270	1400	200
20	3900	1300	3100	970	2050	650	1600	380	1300	250	1100	180



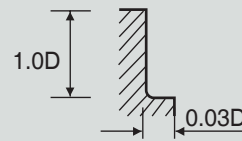
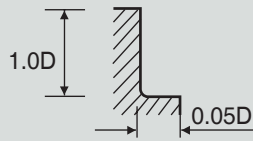
RPM = REVOLUTION PER MIN.
FEED = mm/min.

MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS	
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
1	50000	4800	50000	4200	45000	3800	40000	3000	35000	2600	35000	2300
2	49700	5700	47800	4800	40000	4000	35000	3150	32000	2800	28500	2300
3	33100	6000	31800	5300	26500	4000	23500	3150	21000	2800	19000	2300
4	24900	6000	23900	5300	20000	4000	17500	3150	16000	2800	14500	2300
5	18600	5800	17800	4900	15000	3750	13500	3050	11500	2550	10500	2100
6	13900	4850	13400	4100	11000	3100	10000	2500	8800	2150	8000	1750
8	11100	4200	10700	3500	9000	2700	8000	2150	7000	1850	6500	1550
10	9300	3700	8900	3100	7500	2400	6600	1900	5800	1650	5300	1380
12	6950	2950	6680	2500	5600	1900	5000	1550	4400	1250	4000	1050
16	5570	2650	5350	2200	4500	1700	4000	1350	3500	1000	3200	850
20	4450	2350	4300	1950	3600	1500	3200	1200	2800	800	2550	660



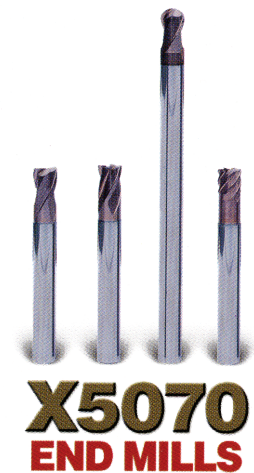
RPM = REVOLUTION PER MIN.
FEED = mm/min.

MATERIAL	HARDENED STEELS HEAT RESISTANT STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS		HARDENED STEELS	
	HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS		HARDNESS	
DIAMETER(mm)	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED	RPM	FEED
6	24800	5350	23500	4900	16000	4900	13500	3300	10500	2100	8000	1450
8	20000	5500	19000	5000	12000	4600	10000	3100	8000	2000	6000	1400
10	16000	4900	15500	4500	9500	4100	8000	2900	6400	1800	4800	1300
12	13000	4500	12500	4100	8000	3800	6600	2500	5300	1600	4000	1150
16	10000	4000	9700	3700	6000	3400	5000	2300	4000	1250	3000	870
20	8000	3350	7800	3400	4800	3200	4000	2100	3200	1020	2400	690

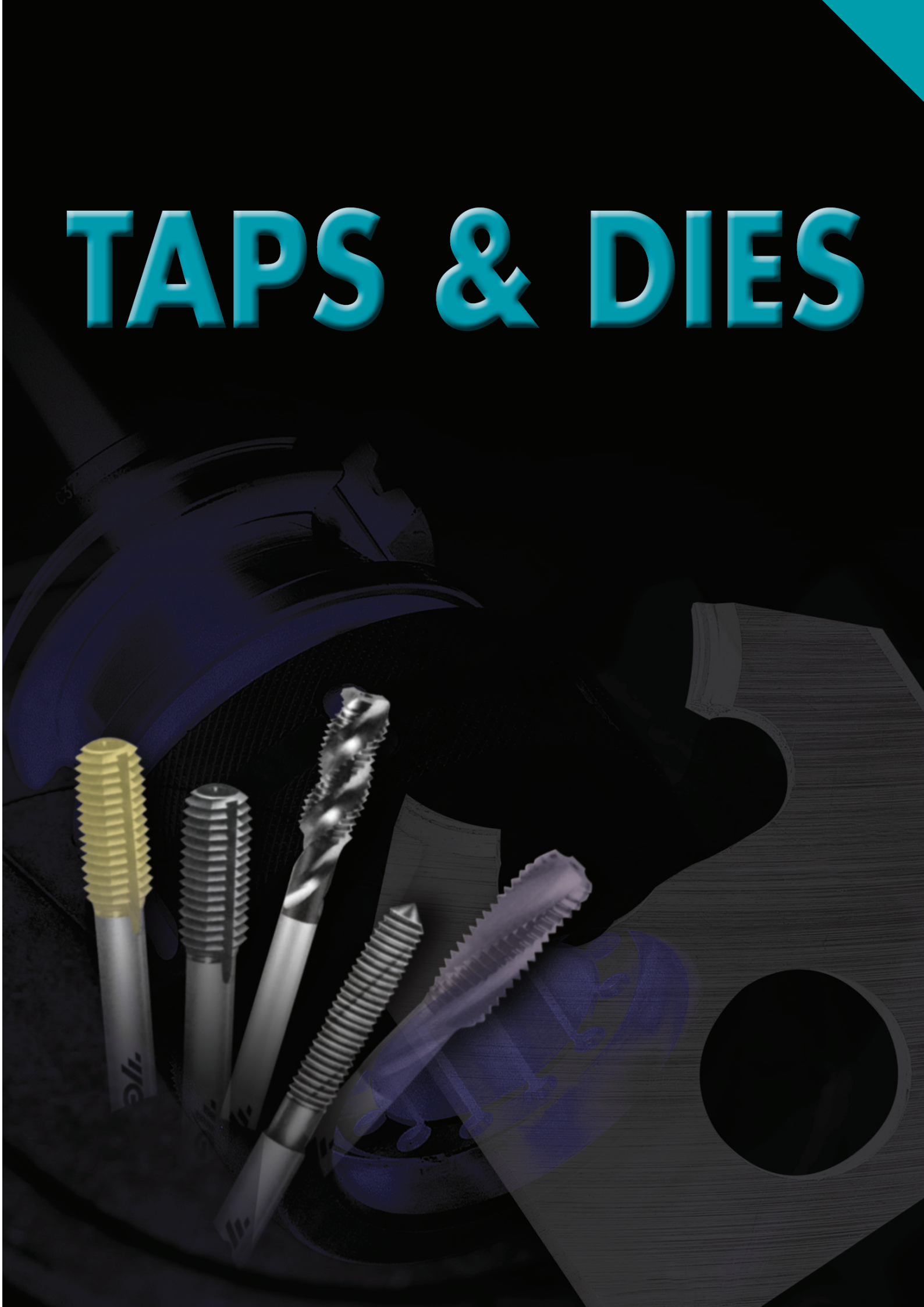


The Feed, in long & extra long types, should be reduced by around 50%.

RPM = REVOLUTION PER MIN.
FEED = mm/min.







TAPS & DIES



TAPS & DIES

SELECTION GUIDE



I Type Spiral Fluted Taps

Tap Symbol	Figure of Taps	Thread Symbol	Tap Materials	Surface Treatment	Page No.
I-SP	 for General Purpose	M	HSS-EX	HOMO	162
I-SP	 for General Purpose	W	HSS-EX	HOMO	164
I-SP	 for General Purpose	UNC/F	HSS-EX	HOMO	165
I-SPsus	 for General Purpose	M	HSS-EX	HOMO	166


I Type Gun Pointed Taps

I-GP	 for General Purpose	M	HSS-EX	HOMO	167
I-GP	 for General Purpose	W	HSS-EX	HOMO	169



S Type Spiral Fluted Taps for Deep Holes

Tap Symbol	Figure of Taps	Thread Symbol	Tap Materials	Surface Treatment	Page No.
S-SP	 for General Purpose	M	HSS-EX	HOMO	170
S-SP	 for General Purpose	W	HSS-EX	HOMO	172

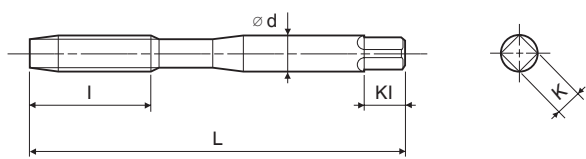
Long Shank Taps

SPLS	 for General Purpose	M	HSS-EX	HOMO	173
SPLS	 for General Purpose	W	HSS-EX	HOMO	174

Fluteless Taps

FLOtin	 for Non-Ferrous Metals & Steels	M	HSS-EX	TiN	175
FLOst	 for Steels	M	HSS-EX	HOMO	177

YG ดอกต๊าปเกลียวสว่าน สีดำ I-SP



Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



M
YH
2.5P
HSS-EX
HOMO

LIST# T1121

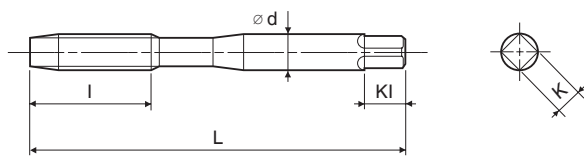
Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท	
YG-6001131	T1121131	M2 x 0.4	YH1	40	7.5	3	2.5	5	2	470	
YG-6001151	T1121151	M2.2 x 0.45		*							
YG-6001191	T1121191	M2.3 x 0.4		*							
YG-6001171	T1121171	M2.5 x 0.45		420							
YG-6001491	T1121491	M2.6 x 0.45	44							*	
YG-6001202	T1121202	M3 x 0.5	YH2	46	11	4	3.2	6		260	
YG-6001211	T1121211	M3 x 0.35	YH1		9.5					*	
YG-6001222	T1121222	M3.5 x 0.6	YH2	48	13					*	
YG-6001231	T1121231	M3.5 x 0.35	YH1		9.5					*	
YG-6001242	T1121242	M4 x 0.7	YH2	52	13	5	4			260	
YG-6001251	T1121251	M4 x 0.5	YH1							*	
YG-6001262	T1121262	M4.5 x 0.75	YH2	55						*	
YG-6001271	T1121271	M4.5 x 0.5	YH1							*	
YG-6001282	T1121282	M5 x 0.8	YH2	60	16	5.5	4.5	7		260	
YG-6001291	T1121291	M5 x 0.5	YH1		13					*	
YG-6001301	T1121301	M5.5 x 0.5			16					*	
YG-6001312	T1121312	M6 x 1	YH2	62	19	6				280	
YG-6001322	T1121322	M6 x 0.75								*	
YG-6001331	T1121331	M6 x 0.5	YH1	60	13					*	
YG-6001342	T1121342	M7 x 1	YH2	65	19	6.2	5			330	
YG-6001352	T1121352	M7 x 0.75								*	
YG-6001362	T1121362	M8 x 1.25		70							380
YG-6001372	T1121372	M8 x 1									400
YG-6001382	T1121382	M8 x 0.75		72	22					*	
YG-6001392	T1121392	M9 x 1.25								*	
YG-6001402	T1121402	M9 x 1								*	
YG-6001412	T1121412	M9 x 0.75								*	
YG-6001422	T1121422	M10 x 1.5	YH2	75	24	7	5.5			500	
YG-6001432	T1121432	M10 x 1.25									500
YG-6001442	T1121442	M10 x 1									530
YG-6001452	T1121452	M10 x 0.75			22						*
YG-6001462	T1121462	M11 x 1.5		80	25	8	6			*	
YG-6001472	T1121472	M11 x 1								*	
YG-6001482	T1121482	M11 x 0.75								*	
YG-6001502	T1121502	M12 x 1.75		82	29	8.5	6.5	9		660	
YG-6001512	T1121512	M12 x 1.5								660	
YG-6001522	T1121522	M12 x 1.25								660	
YG-6001532	T1121532	M12 x 1								*	
YG-6001542	T1121542	M14 x 2		88	30	10.5	8	11		860	
YG-6001552	T1121552	M14 x 1.5								860	
YG-6001562	T1121562	M14 x 1.25								860	
YG-6001572	T1121572	M14 x 1								*	
YG-6001582	T1121582	M15 x 1.5		90						*	

* Order

Tap Limits
180
up to M8 : Male Center
Tapping Speeds
182

YG ดอกต๊าปเกลียวสว่าน สีดำ I-SP



Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



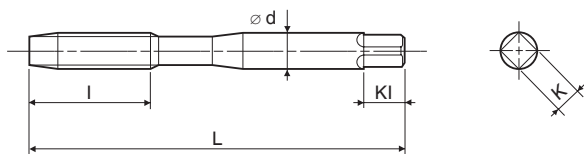
LIST# T1121

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท					
YG-6001592	T1121592	M15 x 1	YH2	90	30	10.5	8	11	3	*					
YG-6001602	T1121602	M16 x 2		95	32	12.5	10	13		1,000					
YG-6001612	T1121612	M16 x 1.5								1,000					
YG-6001622	T1121622	M16 x 1	YH3	100	37	14	11	14		*					
YG-6001653	T1121653	M18 x 2.5													1,180
YG-6001663	T1121663	M18 x 2													*
YG-6001672	T1121672	M18 x 1.5	YH2	95	30	15	12	15		1,180					
YG-6001682	T1121682	M18 x 1										*			
YG-6001703	T1121703	M20 x 2.5	YH3	105	37								1,320		
YG-6001713	T1121713	M20 x 2	YH3	105	37	15	12	15		*					
YG-6001723	T1121723	M20 x 1.5													1,320
YG-6001732	T1121732	M20 x 1								YH2	95	30			*
YG-6001743	T1121743	M22 x 2.5	YH3	115	38	17	13	16		1,970					
YG-6001753	T1121753	M22 x 2													*
YG-6001763	T1121763	M22 x 1.5								YH2	95	30			1,970
YG-6001772	T1121772	M22 x 1	YH3	120	45	19	15	18		*					
YG-6001783	T1121783	M24 x 3													2,640
YG-6001793	T1121793	M24 x 2								YH3	120	45			*
YG-6001803	T1121803	M24 x 1.5	YH3	125	45	20	15	18	4	2,640					
YG-6001812	T1121812	M24 x 1								YH2	95	30			*
YG-6001823	T1121823	M25 x 2													*
YG-6001833	T1121833	M25 x 1.5	YH3	130	45	21	17	20		*					
YG-6001N43	T1121N43	M26 x 2													*
YG-6001853	T1121853	M26 x 1.5								YH2	95	30			*
YG-6001N52	T1121N52	M26 x 1	YH3	135	45	23	17	20		*					
YG-6001863	T1121863	M27 x 3													*
YG-6001873	T1121873	M27 x 2								YH3	130	45			*
YG-6001883	T1121883	M27 x 1.5	YH3	135	45	23	17	20		*					
YG-6001903	T1121903	M28 x 2													*
YG-6001913	T1121913	M28 x 1.5								YH4	105	30			*
YG-6001944	T1121944	M30 x 3.5	YH3	145	51	25	19	22		*					
YG-6001953	T1121953	M30 x 3													*
YG-6001963	T1121963	M30 x 2								YH3	135	45			*
YG-6001973	T1121973	M30 x 1.5	YH3	155	57	28	21	24		*					
YG-6001982	T1121982	M30 x 1								YH2	105	30			*
YG-6001A44	T1121A44	M33 x 3.5								YH4	145	51			*
YG-6001A53	T1121A53	M33 x 3	YH3	145	45	25	19	22		*					
YG-6001A63	T1121A63	M33 x 2													*
YG-6001A73	T1121A73	M33 x 1.5								YH4	145	45			*
YG-6001B34	T1121B34	M36 x 4	YH3	155	45	28	21	24		*					
YG-6001B43	T1121B43	M36 x 3													*
YG-6001B53	T1121B53	M36 x 2								YH3	155	45			*
YG-6001B63	T1121B63	M36 x 1.5							*						

* Order

Tap Limits 180 up to M8 : Male Center Tapping Speeds 182

I-SP**YG ดอกตลับเกลียวสว่าน สีดำ I-SP**

Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.

**LIST# T1251**

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6002202	T1251202	1/8 W 40	JIS II	46	11	4	3.2	6	3	290
YG-6002322	T1251322	3/16 W 24		60	16	5.5	4.5	7		290
YG-6002402	T1251402	1/4 W 20		62	19	6	5	8		310
YG-6002442	T1251442	5/16 W 18		70	22	6.1				360
YG-6002482	T1251482	3/8 W 16		75	24	7	5.5	8		440
YG-6002522	T1251522	7/16 W 14		80	25	8	6	9		660
YG-6002562	T1251562	1/2 W 12		85	29	9	7	10		800
YG-6002602	T1251602	9/16 W 12		90	30	10.5	8	11	1,150	
YG-6002642	T1251642	5/8 W 11		95	32	12	9	12	1,150	
YG-6002702	T1251702	3/4 W 10		105	37	14	11	14	1,630	
YG-6002742	T1251742	7/8 W 9		115	38	17	13	16	2,350	
YG-6002782	T1251782	1 W 8		125	45	20	15	18	3,100	

Tap Limits

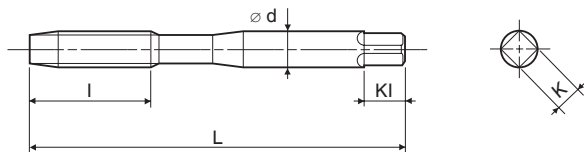
JIS Class 2

up to 5/16 : Male Center

Tapping Speeds

182

YG ดอกตลับเกลียวสว่าน สีด้า I-SP



Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



LIST# T1152

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6003162	T1152162	#4 - 40UNC	JIS II	44	8.5	3	2.5	5	3	330
YG-6003182	T1152182	#4 - 48UNF		46	11	4	3.2	6		320
YG-6003202	T1152202	#5 - 40UNC		48	13					5
YG-6003222	T1152222	#5 - 44UNF		52		16	5.5	4.5		
YG-6003242	T1152242	#6 - 32UNC		60	19					6
YG-6003262	T1152262	#6 - 40UNF		62		22	6.1	5		
YG-6003282	T1152282	#8 - 32UNC		70	24					7
YG-6003302	T1152302	#8 - 36UNF		75		25	8	6		
YG-6003322	T1152322	#10 - 24UNC		80	29					9
YG-6003342	T1152342	#10 - 32UNF		85		30	10.5	8		
YG-6003362	T1152362	#12 - 24UNC		90	32					12
YG-6003382	T1152382	#12 - 28UNF		95		37	14	11		
YG-6003402	T1152402	1/4 - 20UNC		105	38					17
YG-6003422	T1152422	1/4 - 28UNF		115		45	20	15		
YG-6003442	T1152442	5/16 - 18UNC		125	1				8UNC	1
YG-6003462	T1152462	5/16 - 24UNF				1	12UNF	1		
YG-6003482	T1152482	3/8 - 16UNC			1				14UNF	1
YG-6003502	T1152502	3/8 - 24UNF				1	16UNF	1		
YG-6003522	T1152522	7/16 - 14UNC			1				18UNF	1
YG-6003542	T1152542	7/16 - 20UNF				1	20UNF	1		
YG-6003562	T1152562	1/2 - 13UNC			1				11UNC	1
YG-6003582	T1152582	1/2 - 20UNF				1	18UNF	1		
YG-6003602	T1152602	9/16 - 12UNC			1				14UNC	1
YG-6003622	T1152622	9/16 - 18UNF				1	20UNF	1		
YG-6003642	T1152642	5/8 - 11UNC			1				14UNC	1
YG-6003662	T1152662	5/8 - 18UNF				1	20UNF	1		
YG-6003702	T1152702	3/4 - 10UNC			1				14UNC	1
YG-6003722	T1152722	3/4 - 16UNF				1	20UNF	1		
YG-6003742	T1152742	7/8 - 9UNC		1	14UNC				1	*
YG-6003762	T1152762	7/8 - 14UNF				1	20UNF	1		*
YG-6003782	T1152782	1 - 8UNC		1	12UNF				1	*
YG-6003802	T1152802	1 - 12UNF				1	18UNF	1		*

* Order

Tap Limits

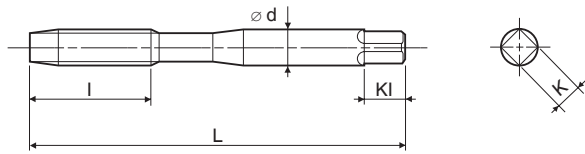
JIS Class 2

up to 5/16 : Male Center

Tapping Speeds

182

YG ดอกตลับเกลียวสว่าน I-SPsus



Suitable for tapping Blind holes in Stainless Steels, Chrome Steels, Chrome Molybdenum Steels and other ductile materials with great tendency to work harden.



LIST# T1191

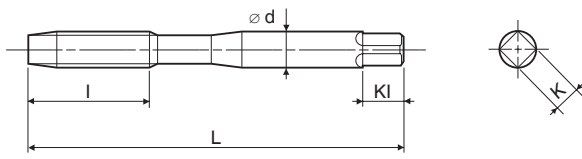
Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6005131	T1191131	M2 x 0.4	YH1	40	7.5	3	2.5	5	2	*
YG-6005151	T1191151	M2.2 x 0.45		42	8.5					*
YG-6005191	T1191191	M2.3 x 0.4	YH2	44	11	4	3.2	6	3	*
YG-6005172	T1191172	M2.5 x 0.45		46						13
YG-6005492	T1191492	M2.6 x 0.45	YH3	48	16	5.5	4.5	7	4	*
YG-6005202	T1191202	M3 x 0.5		52						19
YG-6005222	T1191222	M3.5 x 0.6	YH2	60	22	6.2	5	8	3	290
YG-6005242	T1191242	M4 x 0.7		62						24
YG-6005282	T1191282	M5 x 0.8	YH3	70	29	8.5	6.5	9	4	420
YG-6005312	T1191312	M6 x 1		75						30
YG-6005363	T1191363	M8 x 1.25	YH2	82	32	12.5	10	13	4	*
YG-6005423	T1191423	M10 x 1.5		88						37
YG-6005423	T1191423	M10 x 1.5	YH3	95	37	15	12	15	4	*
YG-6005433	T1191433	M10 x 1.25		100						38
YG-6005503	T1191503	M12 x 1.75	YH3	105	45	19	15	18	4	1,080
YG-6005513	T1191513	M12 x 1.5		110						20
YG-6005523	T1191523	M12 x 1.25	YH4	115	45	20	17	20	4	*
YG-6005532	T1191532	M12 x 1		120						21
YG-6005543	T1191543	M14 x 2	YH3	125	48	23	17	20	4	*
YG-6005553	T1191553	M14 x 1.5		130						45
YG-6005603	T1191603	M16 x 2	YH4	135	45	23	17	20	4	880
YG-6005613	T1191613	M16 x 1.5		140						45
YG-6005653	T1191653	M18 x 2.5	YH3	145	45	23	17	20	4	*
YG-6005673	T1191673	M18 x 1.5		150						45
YG-6005703	T1191703	M20 x 2.5	YH4	155	45	23	17	20	4	*
YG-6005723	T1191723	M20 x 1.5		160						45
YG-6005744	T1191744	M22 x 2.5	YH3	165	45	23	17	20	4	*
YG-6005763	T1191763	M22 x 1.5		170						45
YG-6005784	T1191784	M24 x 3	YH4	175	45	23	17	20	4	*
YG-6005803	T1191803	M24 x 1.5		180						45
YG-6005833	T1191833	M25 x 1.5	YH3	185	45	23	17	20	4	*
YG-6005853	T1191853	M26 x 1.5		190						45
YG-6005864	T1191864	M27 x 3	YH4	195	45	23	17	20	4	*
YG-6005883	T1191883	M27 x 1.5		200						45
YG-6005913	T1191913	M28 x 1.5	YH3	205	45	23	17	20	4	*
YG-6005944	T1191944	M30 x 3.5		210						45
YG-6005973	T1191973	M30 x 1.5	YH3	215	45	23	17	20	4	*
				220						45

* Order

Tap Limits 180 up to M8 : Male Center Tapping Speeds 182

YG ดอกตลับเกลียวทูล สีดำ I-GP



Suitable for tapping Through holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



LIST# T1022

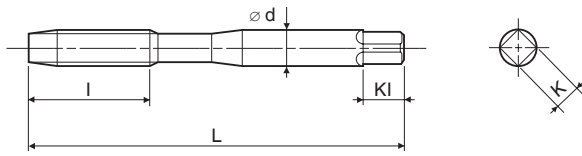
Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท		
YG-6101132	T1022132	M2 x 0.4	YH2	40	7.5	3	2.5	5	2	520		
YG-6101152	T1022152	M2.2 x 0.45		*								
YG-6101192	T1022192	M2.3 x 0.4		*								
YG-6101172	T1022172	M2.5 x 0.45		420								
YG-6101492	T1022492	M2.6 x 0.45		*								
YG-6101202	T1022202	M3 x 0.5		44	11	4	3.2	6	6	260		
YG-6101212	T1022212	M3 x 0.35		46						9.5	*	
YG-6101222	T1022222	M3.5 x 0.6		48						13	*	
YG-6101232	T1022232	M3.5 x 0.35		48	9.5	*						
YG-6101242	T1022242	M4 x 0.7		YH3	52	13	5	4	7	250		
YG-6101252	T1022252	M4 x 0.5			*							
YG-6101262	T1022262	M4.5 x 0.75			55	16	5.5	4.5	8	3	*	
YG-6101272	T1022272	M4.5 x 0.5			60						13	260
YG-6101282	T1022282	M5 x 0.8			60						16	*
YG-6101292	T1022292	M5 x 0.5			62	19	270					
YG-6101302	T1022302	M5.5 x 0.5			62	19	*					
YG-6101312	T1022312	M6 x 1	60		13	*						
YG-6101322	T1022322	M6 x 0.75	65		19	300						
YG-6101332	T1022332	M6 x 0.5	70		22	6.2	5	8	3	*		
YG-6101342	T1022342	M7 x 1	72	380								
YG-6101352	T1022352	M7 x 0.75	70	22						*		
YG-6101363	T1022363	M8 x 1.25	YH3	75	24	7	5.5	9	490			
YG-6101373	T1022373	M8 x 1							*			
YG-6101383	T1022383	M8 x 0.75		72	22	*						
YG-6101393	T1022393	M9 x 1.25		75	22	490						
YG-6101403	T1022403	M9 x 1		75	22	*						
YG-6101413	T1022413	M9 x 0.75		80	25	8	6	9	*			
YG-6101423	T1022423	M10 x 1.5		YH4	82	29	8.5	6.5	9	800		
YG-6101433	T1022433	M10 x 1.25								800		
YG-6101443	T1022443	M10 x 1	YH3	88	30	10.5	8	11	800			
YG-6101453	T1022453	M10 x 0.75							800			
YG-6101463	T1022463	M11 x 1.5							*			
YG-6101473	T1022473	M11 x 1	YH3	90	30	10.5	8	11	800			
YG-6101483	T1022483	M11 x 0.75							*			
YG-6101504	T1022504	M12 x 1.75							660			
YG-6101513	T1022513	M12 x 1.5	660									
YG-6101523	T1022523	M12 x 1.25	660									
YG-6101533	T1022533	M12 x 1	*									
YG-6101544	T1022544	M14 x 2	800									
YG-6101553	T1022553	M14 x 1.5	800									
YG-6101563	T1022563	M14 x 1.25	800									
YG-6101573	T1022573	M14 x 1	*									
YG-6101583	T1022583	M15 x 1.5	*									

* Order

Tap Limits 180 up to M8 : Male Center Tapping Speeds 182

YG ดอกต๊าปเกลียวทูล สีดำ I-GP



Suitable for tapping Through holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



LIST# T1022

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6101593	T1022593	M15 x 1	YH3	90	30	10.5	8	11	3	*
YG-6101604	T1022604	M16 x 2	YH4	95	32	12.5	10	13		940
YG-6101613	T1022613	M16 x 1.5	YH3							940
YG-6101623	T1022623	M16 x 1						*		
YG-6101654	T1022654	M18 x 2.5		100	37	14	11	14		1,100
YG-6101664	T1022664	M18 x 2	YH4							*
YG-6101674	T1022674	M18 x 1.5								1,100
YG-6101683	T1022683	M18 x 1	YH3	95	30					*
YG-6101704	T1022704	M20 x 2.5		105	37	15	12	15		1,260
YG-6101714	T1022714	M20 x 2	YH4							*
YG-6101724	T1022724	M20 x 1.5								1,260
YG-6101733	T1022733	M20 x 1	YH3	95	30					*
YG-6101744	T1022744	M22 x 2.5		115	38	17	13	16		1,800
YG-6101754	T1022754	M22 x 2	YH4							*
YG-6101764	T1022764	M22 x 1.5								1,800
YG-6101773	T1022773	M22 x 1	YH3	95	30					*
YG-6101784	T1022784	M24 x 3		120	45	19	15	18		2,500
YG-6101794	T1022794	M24 x 2	YH4							*
YG-6101804	T1022804	M24 x 1.5							2,500	
YG-6101813	T1022813	M24 x 1	YH3	95	30				*	
YG-6101824	T1022824	M25 x 2		125	45	15	18	18	*	
YG-6101834	T1022834	M25 x 1.5	YH4						*	
YG-6101N44	T1022N44	M26 x 2		135	45	20	17	20	*	
YG-6101854	T1022854	M26 x 1.5								
YG-6101N53	T1022N53	M26 x 1	YH3	95	30				*	
YG-6101864	T1022864	M27 x 3		130	45	21	17	20	*	
YG-6101874	T1022874	M27 x 2								
YG-6101884	T1022884	M27 x 1.5	YH4						*	
YG-6101904	T1022904	M28 x 2		145	51	25	19	22	*	
YG-6101914	T1022914	M28 x 1.5								
YG-6101945	T1022945	M30 x 3.5	YH5	135	48	23	17	20	*	
YG-6101954	T1022954	M30 x 3								
YG-6101964	T1022964	M30 x 2	YH4		45				*	
YG-6101974	T1022974	M30 x 1.5							*	
YG-6101982	T1022982	M30 x 1	YH2	105	30				*	
YG-6101A45	T1022A45	M33 x 3.5	YH5	145	51	25	19	22	*	
YG-6101A54	T1022A54	M33 x 3	YH4							
YG-6101A63	T1022A63	M33 x 2	YH3		45				*	
YG-6101A74	T1022A74	M33 x 1.5	YH4						*	
YG-6101B35	T1022B35	M36 x 4	YH5	155	57	28	21	24	*	
YG-6101B44	T1022B44	M36 x 3	YH4							
YG-6101B53	T1022B53	M36 x 2	YH3		45				*	
YG-6101B64	T1022B64	M36 x 1.5	YH4						*	

* Order

Tap Limits

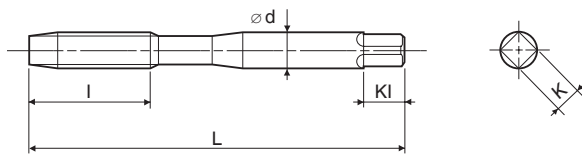
180

up to M8 : Male Center

Tapping Speeds

182

YG ดอกต๊าปเกลียวทูลู สีดำ I-GP



Suitable for tapping Through holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



W JIS II 5P HSS-EX HOMO

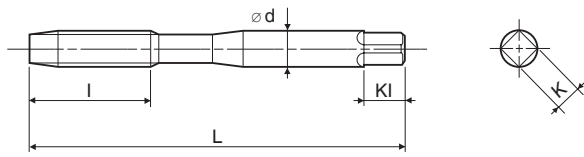
LIST# T1282

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6102202	T1282202	1/8 W 40	JIS II	46	11	4	3.2	6	3	270
YG-6102322	T1282322	3/16 W 24		60	16	5.5	4.5	7		280
YG-6102402	T1282402	1/4 W 20		62	19	6	5	8		300
YG-6102442	T1282442	5/16 W 18		70	22	6.1	5	8		330
YG-6102482	T1282482	3/8 W 16		75	24	7	5.5	9		400
YG-6102522	T1282522	7/16 W 14		80	25	8	6	9		600
YG-6102562	T1282562	1/2 W 12		85	29	9	7	10		750
YG-6102602	T1282602	9/16 W 12		90	30	10.5	8	11		1,100
YG-6102642	T1282642	5/8 W 11		95	32	12	9	12		1,100
YG-6102702	T1282702	3/4 W 10		105	37	14	11	14		1,580
YG-6102742	T1282742	7/8 W 9		115	38	17	13	16		2,400
YG-6102782	T1282782	1 W 8		125	45	20	15	18		3,200

Tap Limits JIS Class 2 up to 5/16 : Male Center Tapping Speeds 182

YG ดอกต๊าปเกลียวส่วน S-SP



Suitable for tapping deep Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



DEEP HOLES



LIST# T1112

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	l	d	K	KI	Flutes	อัน/บาท
YG-6006131	T1112131	M2 x 0.4	YH1	40	4	3	2.5	5	2	*
YG-6006151	T1112151	M2.2 x 0.45		42	4.5					*
YG-6006191	T1112191	M2.3 x 0.4		42	4					*
YG-6006171	T1112171	M2.5 x 0.45		44	4.5					*
YG-6006491	T1112491	M2.6 x 0.45		44	4.5					*
YG-6006202	T1112202	M3 x 0.5	YH2	46	5	4	3.2	6	300	*
YG-6006211	T1112211	M3 x 0.35		46	3.5					*
YG-6006222	T1112222	M3.5 x 0.6	YH2	48	6	5	4	4	7	*
YG-6006231	T1112231	M3.5 x 0.35		48	3.5					*
YG-6006242	T1112242	M4 x 0.7	YH2	52	7	6.2	5	5	8	290
YG-6006251	T1112251	M4 x 0.5		52	5					*
YG-6006262	T1112262	M4.5 x 0.75	YH2	55	7.5	7	4.5	7	3	*
YG-6006271	T1112271	M4.5 x 0.5		55	5					*
YG-6006282	T1112282	M5 x 0.8	YH2	60	8	6.2	5	5.5	8	290
YG-6006291	T1112291	M5 x 0.5		60	5					*
YG-6006301	T1112301	M5.5 x 0.5	YH1	60	5	6.2	5	5.5	8	*
YG-6006312	T1112312	M6 x 1		60	10					310
YG-6006322	T1112322	M6 x 0.75	YH2	62	7.5	6.2	5	5.5	8	*
YG-6006331	T1112331	M6 x 0.5		62	5					*
YG-6006342	T1112342	M7 x 1	YH1	65	10	6.2	5	5.5	8	*
YG-6006352	T1112352	M7 x 0.75		65	7.5					*
YG-6006362	T1112362	M8 x 1.25	YH2	70	12.5	7	5.5	8	8	420
YG-6006372	T1112372	M8 x 1		70	10					*
YG-6006382	T1112382	M8 x 0.75	YH2	70	7.5	7	5.5	8	8	*
YG-6006392	T1112392	M9 x 1.25		70	12.5					*
YG-6006402	T1112402	M9 x 1	YH2	72	10	7	5.5	8	8	*
YG-6006412	T1112412	M9 x 0.75		72	7.5					*
YG-6006422	T1112422	M10 x 1.5	YH2	75	15	7	5.5	8	8	550
YG-6006432	T1112432	M10 x 1.25		75	12.5					550
YG-6006442	T1112442	M10 x 1	75	10	*					

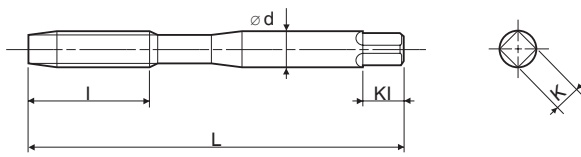
* Order

Tap Limits 180

up to M8 : Male Center

Tapping Speeds 182

YG ดอกตลับเกลียวส่วน S-SP



Suitable for tapping deep Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



DEEP HOLES



LIST# T1112

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	l	d	K	Kl	Flutes	อัน/บาท
YG-6006452	T1112452	M10 x 0.75	YH2	75	7.5	7	5.5	8	3	*
YG-6006462	T1112462	M11 x 1.5		80	15	8	6	9		*
YG-6006472	T1112472	M11 x 1		10	*					
YG-6006482	T1112482	M11 x 0.75		7.5	*					
YG-6006502	T1112502	M12 x 1.75		17.5	8.5	6.5	11	710		
YG-6006512	T1112512	M12 x 1.5		15				*		
YG-6006522	T1112522	M12 x 1.25		12.5				*		
YG-6006532	T1112532	M12 x 1		10	*					
YG-6006542	T1112542	M14 x 2		20	10.5	8	11	870		
YG-6006552	T1112552	M14 x 1.5		15				*		
YG-6006562	T1112562	M14 x 1.25		12.5				*		
YG-6006572	T1112572	M14 x 1		10	*					
YG-6006582	T1112582	M15 x 1.5		90	15	12.5	10	13		*
YG-6006592	T1112592	M15 x 1			10					*
YG-6006602	T1112602	M16 x 2	20	95	15	10	13	1,040		
YG-6006612	T1112612	M16 x 1.5	15					*		
YG-6006622	T1112622	M16 x 1	10	*						
YG-6006653	T1112653	M18 x 2.5	YH3	100	25	14	11	14	1,220	
YG-6006663	T1112663	M18 x 2			20				*	
YG-6006672	T1112672	M18 x 1.5	YH2	95	15	15	15	4	*	
YG-6006682	T1112682	M18 x 1			10				*	
YG-6006703	T1112703	M20 x 2.5	YH3	105	25	15	12	15	1,370	
YG-6006713	T1112713	M20 x 2			20				*	
YG-6006723	T1112723	M20 x 1.5	YH2	95	15	17	13	16	*	
YG-6006732	T1112732	M20 x 1			10				*	
YG-6006743	T1112743	M22 x 2.5	YH3	115	25	17	13	16	2,040	
YG-6006753	T1112753	M22 x 2			20				*	
YG-6006763	T1112763	M22 x 1.5	YH2	95	15	17	13	16	*	
YG-6006772	T1112772	M22 x 1			10				*	

* Order

Tap Limits

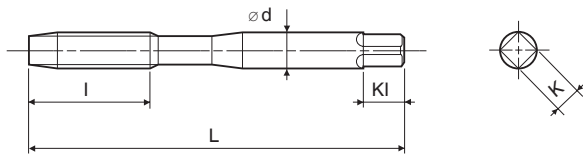
180

up to M8 : Male Center

Tapping Speeds

182

YG ดอกตลับเกลียวสว่าน S-SP



Suitable for tapping deep Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



DEEP HOLES



LIST# T1182

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6007202	T1182202	1/8 W 40	JIS II	46	6	4	3.2	6	3	310
YG-6007322	T1182322	3/16 W 24		60	10	5.5	4.5	7		320
YG-6007402	T1182402	1/4 W 20		62	12	6	5	8		340
YG-6007442	T1182442	5/16 W 18		70	14	6.1				360
YG-6007482	T1182482	3/8 W 16		75	15	7	5.5	8		440
YG-6007522	T1182522	7/16 W 14		80	18	8	6	9		650
YG-6007562	T1182562	1/2 W 12		85	19	9	7	10		810
YG-6007602	T1182602	9/16 W 12		90	21	10.5	8	11		1,150
YG-6007642	T1182642	5/8 W 11		95	23	12	9	12		1,150
YG-6007702	T1182702	3/4 W 10		105	25	14	11	14		1,670
YG-6007742	T1182742	7/8 W 9		115	28	17	13	16	2,560	
YG-6007782	T1182782	1 W 8		125	31	20	15	18	4	3,390

Tap Limits

JIS Class 2

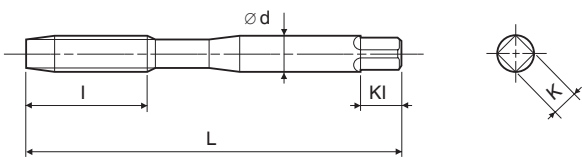
up to 5/16 : Male Center

Tapping Speeds

182

YG ดอกตลับเกลียวสว่าน SPLS ยาว 100 mm

YG ดอกตลับเกลียวสว่าน SPLS ยาว 150 mm



Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



LIST# T1103 (100mm)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท		
YG-6010201	T1103201	M3 x 0.5	YH1	100	11	4	3.2	6	3	630		
YG-6010242	T1103242	M4 x 0.7	YH2		13	5	4	7		7	600	
YG-6010282	T1103282	M5 x 0.8			16	5.5	4.5				560	
YG-6010312	T1103312	M6 x 1			19	6						460
YG-6010362	T1103362	M8 x 1.25			22	6.2	5	560				
YG-6010422	T1103422	M10 x 1.5			YH2	100	24	7		5.5	8	680
YG-6010432	T1103432	M10 x 1.25										680
YG-6010502	T1103502	M12 x 1.75										800
YG-6010512	T1103512	M12 x 1.5										800
YG-6010522	T1103522	M12 x 1.25										800
YG-6010542	T1103542	M14 x 2										1,140
YG-6010552	T1103552	M14 x 1.5										1,140

LIST# T1105 (150mm)

Unit : mm

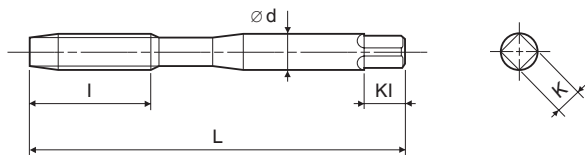
รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท							
YG-6011201	T1105201	M3 x 0.5	YH1	150	11	4	3.2	6	3	*							
YG-6011242	T1105242	M4 x 0.7	YH2		13	5	4	7		7	1,080						
YG-6011282	T1105282	M5 x 0.8			16	5.5	4.5				780						
YG-6011312	T1105312	M6 x 1			19	6						950					
YG-6011362	T1105362	M8 x 1.25			YH2	150	24	7		5.5	8	1,150					
YG-6011422	T1105422	M10 x 1.5										1,150					
YG-6011432	T1105432	M10 x 1.25										1,500					
YG-6011502	T1105502	M12 x 1.75										1,500					
YG-6011512	T1105512	M12 x 1.5										1,500					
YG-6011522	T1105522	M12 x 1.25										1,500					
YG-6011542	T1105542	M14 x 2										1,800					
YG-6011552	T1105552	M14 x 1.5										1,800					
YG-6011602	T1105602	M16 x 2										*					
YG-6011612	T1105612	M16 x 1.5										*					
YG-6011653	T1105653	M18 x 2.5										YH3	150	37	14	11	14
YG-6011672	T1105672	M18 x 1.5			YH2	*											
YG-6011703	T1105703	M20 x 2.5			YH3	38	17	13		16	4	*					
YG-6011723	T1105723	M20 x 1.5										*					
YG-6011743	T1105743	M22 x 2.5	*														
YG-6011763	T1105763	M22 x 1.5	*														
YG-6011783	T1105783	M24 x 3	*														
YG-6011803	T1105803	M24 x 1.5	*														

* Order

Tap Limits 180 up to M8 : Male Center Tapping Speeds 182

YG ดอกตลับเกลียวสว่าน SPLS ยาว 100 mm

YG ดอกตลับเกลียวสว่าน SPLS ยาว 150 mm



Suitable for tapping Blind holes in Carbon Steels and Alloy Steels, where chips are produced in a continuous coil state.



LIST# T1130 (100mm)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6014202	T1130202	1/8 W 40	JIS II	100	11	4	3.2	6	3	660
YG-6014322	T1130322	3/16 W 24			16	5.5	4.5	7		540
YG-6014402	T1130402	1/4 W 20			19	6	8	7		480
YG-6014442	T1130442	5/16 W 18			22	6.1	5	8		580
YG-6014482	T1130482	3/8 W 16			24	7	5.5	9		700
YG-6014522	T1130522	7/16 W 14			25	8	6	10		780
YG-6014562	T1130562	1/2 W 12			29	9	7	10		880

LIST# T1150 (150mm)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	Flutes	อัน/บาท
YG-6015202	T1150202	1/8 W 40	JIS II	150	11	4	3.2	6	3	980
YG-6015322	T1150322	3/16 W 24			16	5.5	4.5	7		800
YG-6015402	T1150402	1/4 W 20			19	6	8	7		820
YG-6015442	T1150442	5/16 W 18			22	6.1	5	8		950
YG-6015482	T1150482	3/8 W 16			24	7	5.5	9		1,140
YG-6015522	T1150522	7/16 W 14			25	8	6	10		1,400
YG-6015562	T1150562	1/2 W 12			29	9	7	10	1,550	
YG-6015602	T1150602	9/16 W 12			30	10.5	8	11	1,950	
YG-6015642	T1150642	5/8 W 11			32	12	9	12	2,050	
YG-6015702	T1150702	3/4 W 10			37	14	11	14	3,300	
YG-6015742	T1150742	7/8 W 9			38	17	13	16	4,400	
YG-6015782	T1150782	1 W 8			45	20	15	18	5,500	

Tap Limits

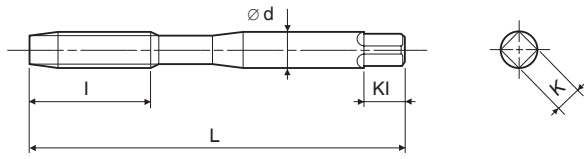
JIS Class 2

up to 5/16 : Male Center

Tapping Speeds

182

YG โรลตาป FLOtin # T3751



Suitable for tapping in Steels, Non-Ferrous Metal Alloys and Stainless Steels. Capable of efficient, long life, high speed tapping.

with OIL GROOVE



LIST# T3751(2P)

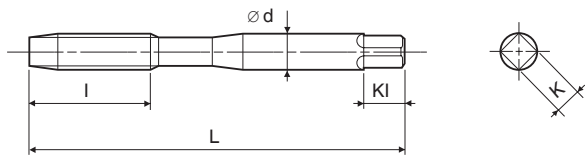
Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	อัน/บาท	
YG-6201134	T3751134	M2 x 0.4	GH4	40	7.5	3	2.5	5	880	
YG-6201194	T3751194	M2.3 x 0.4		42	8.5				830	
YG-6201174	T3751174	M2.5 x 0.45		44					830	
YG-6201494	T3751494	M2.6 x 0.45			830					
YG-6201205	T3751205	M3 x 0.5	GH5	46	11	4	3.2	6	720	
YG-6201225	T3751225	M3.5 x 0.6		48	13				720	
YG-6201246	T3751246	M4 x 0.7	GH6	52	16	5	4	7	690	
YG-6201286	T3751286	M5 x 0.8		60		5.5	710			
YG-6201317	T3751317	M6 x 1	GH7	62	19	6	4.5	8	760	
YG-6201347	T3751347	M7 x 1		65		850				
YG-6201367	T3751367	M8 x 1.25		70	22	6.2	5		1,020	
YG-6201377	T3751377	M8 x 1			1,020					
YG-6201427	T3751427	M10 x 1.5	GH8	75	24	7	5.5	8	1,300	
YG-6201437	T3751437	M10 x 1.25								1,300
YG-6201447	T3751447	M10 x 1								*
YG-6201508	T3751508	M12 x 1.75								*
YG-6201517	T3751517	M12 x 1.5	GH7	82	29	8.5	6.5	9	*	
YG-6201527	T3751527	M12 x 1.25								*
YG-6201537	T3751537	M12 x 1								*
YG-6201540	T3751540	M14 x 2	GH10	88	30	10.5	8	11	*	
YG-6201559	T3751559	M14 x 1.5	GH9							*
YG-6201600	T3751600	M16 x 2	GH10	95	32	12.5	10	13	*	
YG-6201619	T3751619	M16 x 1.5	GH9							*
YG-620165A	T375165A	M18 x 2.5	GH11	100	37	14	11	14	*	
YG-6201670	T3751670	M18 x 1.5	GH10							*
YG-620170A	T375170A	M20 x 2.5	GH11							*
YG-6201720	T3751720	M20 x 1.5	GH10						105	15

* Order

Tap Limits 181 up to M6 : Male Center Tapping Speeds 182

YG โรลตาป FLOtin # T3741



Suitable for tapping in Steels, Non-Ferrous Metal Alloys and Stainless Steels. Capable of efficient, long life, high speed tapping.



with OIL GROOVE



LIST# T3741(4P)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	อัน/บาท				
YG-6202134	T3741134	M2 x 0.4	GH4	40	7.5	3	2.5	5	880				
YG-6202194	T3741194	M2.3 x 0.4		42	8.5				830				
YG-6202174	T3741174	M2.5 x 0.45		44					830				
YG-6202494	T3741494	M2.6 x 0.45			830								
YG-6202205	T3741205	M3 x 0.5	GH5	46	11	4	3.2	6	720				
YG-6202225	T3741225	M3.5 x 0.6	48	13	720								
YG-6202246	T3741246	M4 x 0.7	GH6	52	16	5	4	7	690				
YG-6202286	T3741286	M5 x 0.8		60		5.5			710				
YG-6202317	T3741317	M6 x 1	GH7	62	19	6	4.5	8	760				
YG-6202347	T3741347	M7 x 1		65		850							
YG-6202367	T3741367	M8 x 1.25		70	22	6.2	5		1,020				
YG-6202377	T3741377	M8 x 1							1,020				
YG-6202427	T3741427	M10 x 1.5	GH7	75	24	7	5.5	8	1,300				
YG-6202437	T3741437	M10 x 1.25							1,300				
YG-6202447	T3741447	M10 x 1							*				
YG-6202508	T3741508	M12 x 1.75							GH8				
YG-6202517	T3741517	M12 x 1.5	GH7	82	29	8.5	6.5	9	*				
YG-6202527	T3741527	M12 x 1.25							*				
YG-6202537	T3741537	M12 x 1							*				
YG-6202540	T3741540	M14 x 2							GH10				
YG-6202559	T3741559	M14 x 1.5	GH9	88	30	10.5	8	11	*				
YG-6202600	T3741600	M16 x 2	GH10	95	32	12.5	10	13	*				
YG-6202619	T3741619	M16 x 1.5	GH9						*				
YG-620265A	T374165A	M18 x 2.5	GH11										*
YG-6202670	T3741670	M18 x 1.5	GH10						100	37	14	11	14
YG-620270A	T374170A	M20 x 2.5	GH11					*					
YG-6202720	T3741720	M20 x 1.5	GH10	105	15	12	15	*					

* Order

Tap Limits

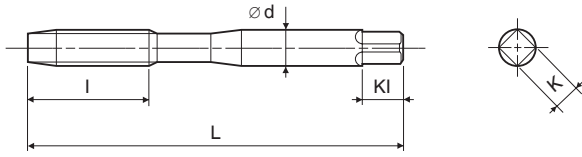
181

up to M6 : Male Center

Tapping Speeds

182

YG โรลตาป FLOst # T1771



Suitable for tapping in Low Carbon Steels, Alloy Steels and Stainless Steels.



with OIL GROOVE for STEELS



LIST# T1771(2P)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	I	d	K	KI	อัน/บาท			
YG-6203134	T1771134	M2 x 0.4	GH4	40	7.5	3	2.5	5	730			
YG-6203194	T1771194	M2.3 x 0.4		42	8.5				680			
YG-6203174	T1771174	M2.5 x 0.45		44						680		
YG-6203494	T1771494	M2.6 x 0.45	GH5	46	11	4	3.2	6		570		
YG-6203205	T1771205	M3 x 0.5		48	13				5	4	7	570
YG-6203246	T1771246	M4 x 0.7	52	GH6		5.5	4.5	7				540
YG-6203286	T1771286	M5 x 0.8	60									16
YG-6203317	T1771317	M6 x 1	62	19	6.2	5	8	600				
YG-6203347	T1771347	M7 x 1	65					GH7	7	5.5	9	650
YG-6203367	T1771367	M8 x 1.25	70	22	8	1,080						
YG-6203377	T1771377	M8 x 1					75					24
YG-6203427	T1771427	M10 x 1.5	GH8	82	29	8.5	6.5	9	*			
YG-6203437	T1771437	M10 x 1.25							GH7	88	30	10.5
YG-6203447	T1771447	M10 x 1	GH9	95	32	12.5	10	13				
YG-6203508	T1771508	M12 x 1.75							GH10	100	37	14
YG-6203517	T1771517	M12 x 1.5	GH11	105	15	12	15	*				
YG-6203527	T1771527	M12 x 1.25						GH10				
YG-6203537	T1771537	M12 x 1	GH9						*			
YG-6203540	T1771540	M14 x 2	GH10						*			
YG-6203559	T1771559	M14 x 1.5	GH11						*			
YG-6203600	T1771600	M16 x 2	GH10						*			
YG-6203619	T1771619	M16 x 1.5	GH11						*			
YG-620365A	T177165A	M18 x 2.5	GH10						*			
YG-6203670	T1771670	M18 x 1.5	GH11						*			
YG-620370A	T177170A	M20 x 2.5	GH10						*			
YG-6203720	T1771720	M20 x 1.5	GH11						*			

* Order

Tap Limits

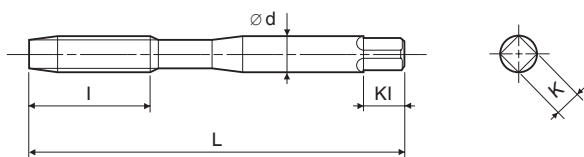
181

up to M6 : Male Center

Tapping Speeds

182

YG โรลตาป FLOst # T1761



Suitable for tapping in Low Carbon Steels, Alloy Steels and Stainless Steels.



with OIL GROOVE for STEELS



LIST# T1761(4P)

Unit : mm

รหัสสินค้า	EDP No.	Thread Size	TAP Limits	L	l	d	K	KI	อัน/บาท	
YG-6204134	T1761134	M2 x 0.4	GH4	40	7.5	3	2.5	5	730	
YG-6204194	T1761194	M2.3 x 0.4		42	8.5				680	
YG-6204174	T1761174	M2.5 x 0.45		44					680	
YG-6204494	T1761494	M2.6 x 0.45		44					680	
YG-6204205	T1761205	M3 x 0.5	GH5	46	11	4	3.2	6	570	
YG-6204225	T1761225	M3.5 x 0.6		48	13				570	
YG-6204246	T1761246	M4 x 0.7	GH6	52		5	4	7	540	
YG-6204286	T1761286	M5 x 0.8		60		16			5.5	4.5
YG-6204317	T1761317	M6 x 1		62	19	6				
YG-6204347	T1761347	M7 x 1	65	6.2		5	8	650		
YG-6204367	T1761367	M8 x 1.25	70					22	820	
YG-6204377	T1761377	M8 x 1			820					
YG-6204427	T1761427	M10 x 1.5	GH7	75	24	7	5.5	1,080		
YG-6204437	T1761437	M10 x 1.25						1,080		
YG-6204447	T1761447	M10 x 1						*		
YG-6204508	T1761508	M12 x 1.75	GH8						*	
YG-6204517	T1761517	M12 x 1.5	GH7	82	29	8.5	6.5	9	*	
YG-6204527	T1761527	M12 x 1.25							*	
YG-6204537	T1761537	M12 x 1							*	
YG-6204540	T1761540	M14 x 2	GH10	88	30	10.5	8	11	*	
YG-6204559	T1761559	M14 x 1.5	GH9						*	
YG-6204600	T1761600	M16 x 2	GH10	95	32	12.5	10	13	*	
YG-6204619	T1761619	M16 x 1.5	GH9						*	
YG-620465A	T176165A	M18 x 2.5	GH11						100	37
YG-6204670	T1761670	M18 x 1.5	GH10	*						
YG-620470A	T176170A	M20 x 2.5	GH11	105	15	12	15	*		
YG-6204720	T1761720	M20 x 1.5	GH10					*		

* Order

Tap Limits 181

up to M6 : Male Center

Tapping Speeds 182

TECHNICAL INFORMATION

180~181 ■ TAP LIMIT SYSTEM

182 ■ RECOMMENDED TAPPING SPEEDS

183~188 ■ RECOMMENDED TAP DRILL SIZES

189 ■ SYMBOL USED FOR STANDARD
THREADS (PARTIAL LISTING)

190 ■ HARDNESS CONVERSION TABLE

YG-1 YH LIMIT SYSTEM

YG-1 applies a unique system of tap pitch diameter limits. We call it the YH limits system. Using the step method, you can select the best tap pitch diameter limits to match your work condition.

YH limit Most of Y.G-1's taps use this limit system. The limits calculated as follows;

1. Up to 0.6P (40TPI)

upper limits : $10\mu\text{m} + 15\mu\text{m} \times n$
 lower limit : (upper limits) - $15\mu\text{m}$

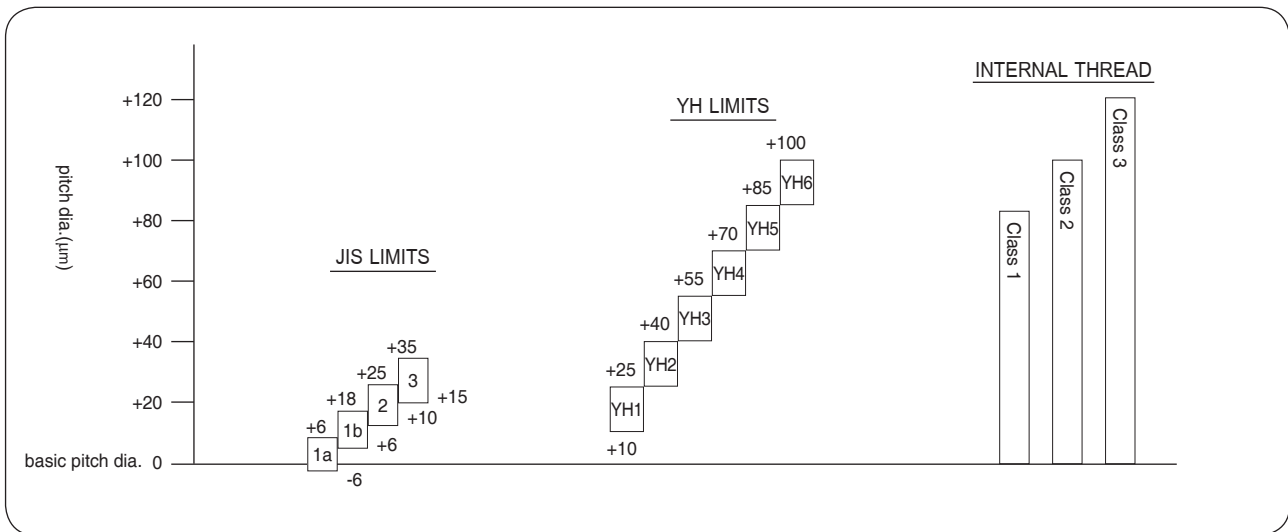
n=YH No.

2. Above 0.7P (36TPI)

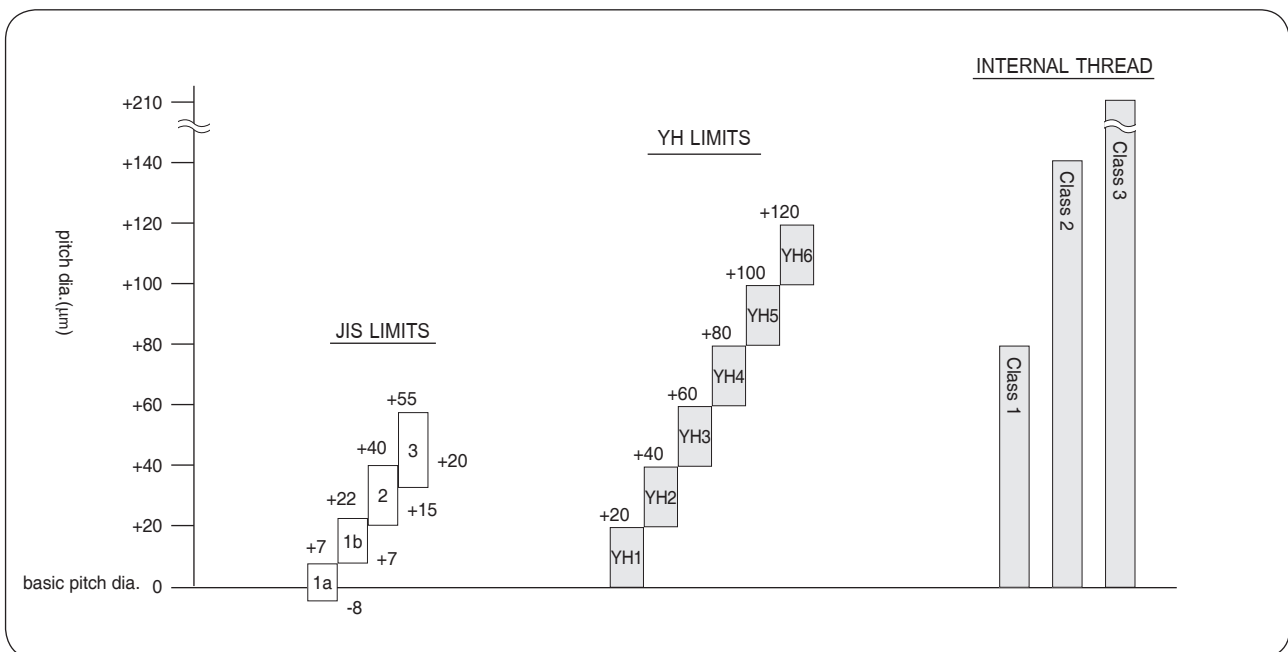
upper limits : $20\mu\text{m} \times n$
 lower limit : (upper limits) - $20\mu\text{m}$

n=YH No.

Example M3 x 0.5



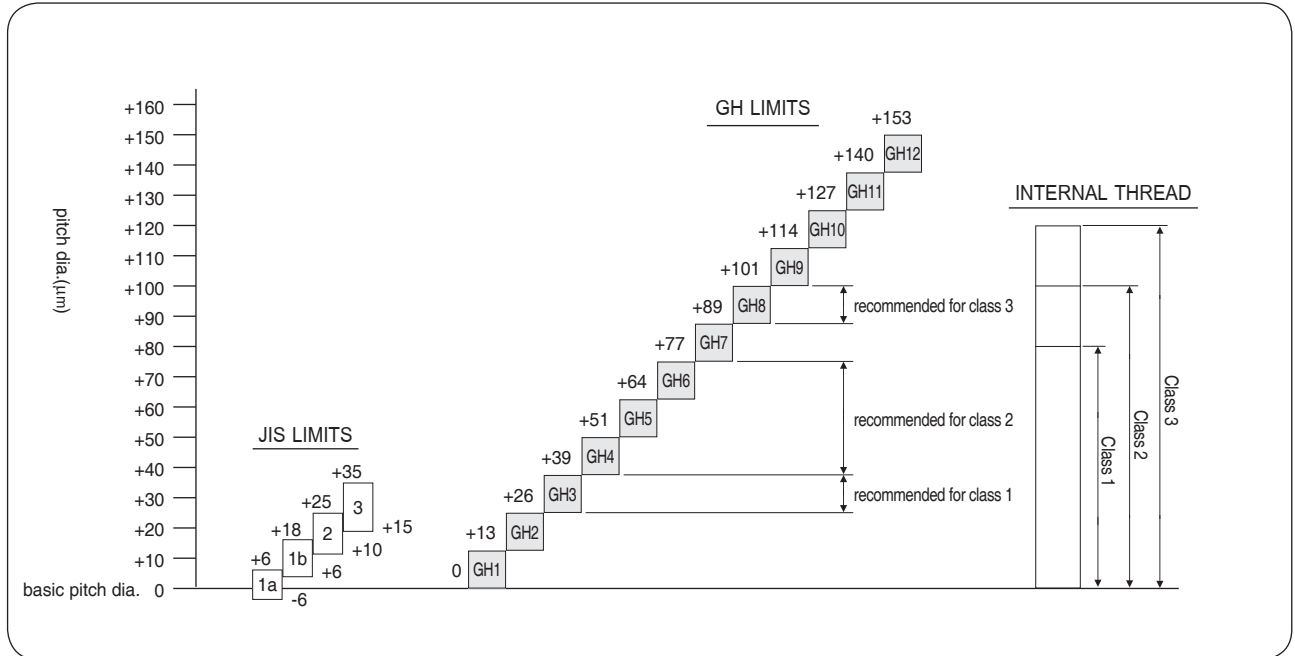
Example M10 x 1.5



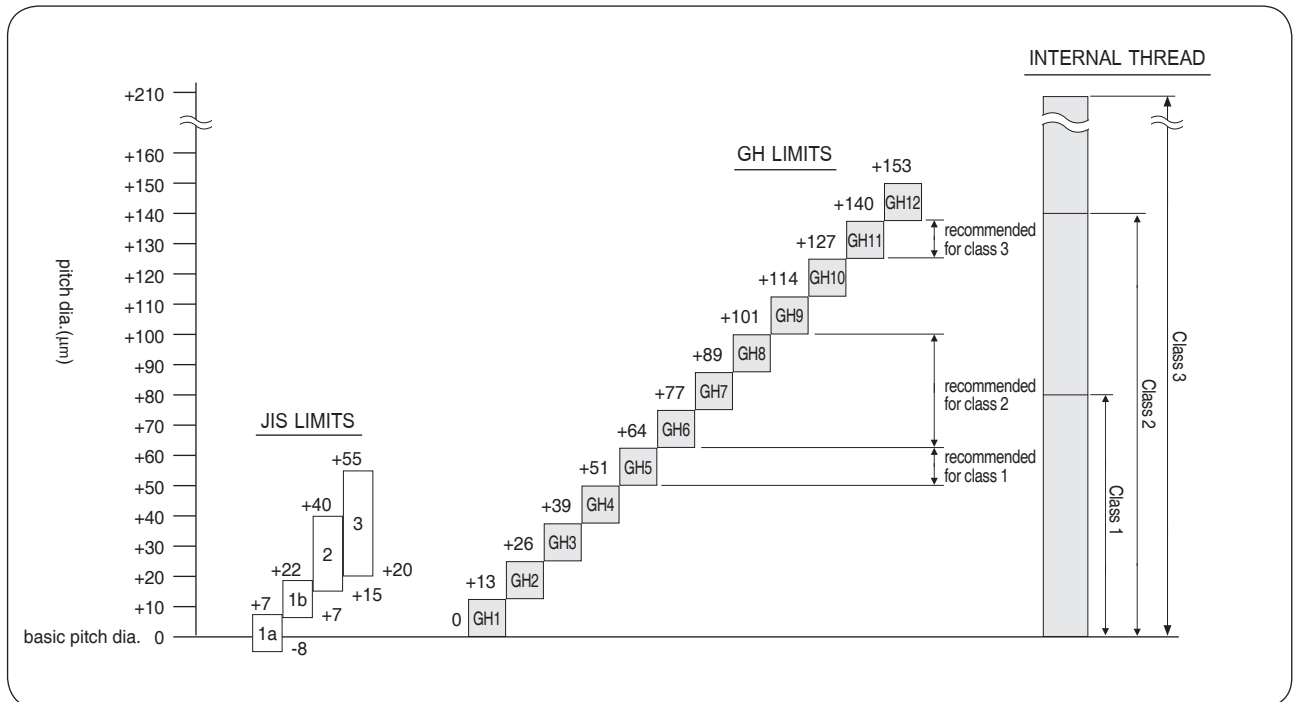
YG-1 GH LIMIT SYSTEM

YG-1's fluteless taps are described by the GH limit system. The limits are established by increments of 12.7 μm .

Example M3 x 0.5



Example M10 x 1.5



RECOMMENDED TAPPING SPEEDS

RECOMMENDED TAPPING SPEED AND CUTTING FLUIDS

This chart shows the recommended tapping speeds and cutting fluids. Tap material, type of tap chamfer length, dimension of drill hole, work materials and cutting fluids are important factors for determining suitable tapping speed. Lubrication, cooling, capability and adhesion Resistance are the three important factors effecting cutting fluid.

WORK MATERIALS		TAPPING SPEED (m/min)						CUTTING FLUIDS
		SPIRAL FLUTED TAP	GUN POINTED TAP	STRAIGHT FLUTED TAP	FLUTELESS TAP	SOLID CARBIDE TAP	PIPE TAP	
LOW CARBON STEELS	≤ C0.2%	8 ~ 13	15 ~ 25	8 ~ 13	8 ~ 13	-	3 ~ 6	Sulfochlorinated Oil (Active Type) Tapping Paste EP Additive Non-Water-Soluble Cutting Fluid (Emulsion Type)
MEDIUM CARBON STEELS	C0.25~0.40%	7 ~ 12	10 ~ 15	7 ~ 12	7 ~ 10	-	3 ~ 6	
HIGH CARBON STEELS	≥ C0.45%	6 ~ 9	8 ~ 13	6 ~ 9	5 ~ 8	-	2 ~ 5	
ALLOY STEELS	SCM	7 ~ 12	10 ~ 15	7 ~ 12	5 ~ 8	-	2 ~ 5	
HARDENED STEELS	HRc 25~40	3 ~ 5 (4 ~ 8)	4 ~ 6 (6 ~ 10)	3 ~ 5 (4 ~ 8)	-	-	2 ~ 5	
STAINLESS STEELS	SUS	5 ~ 8	8 ~ 13	4 ~ 7	5 ~ 10	-	5 ~ 10	
TOOL STEELS	SKD	6 ~ 9	7 ~ 10	6 ~ 9	-	-	2 ~ 5	
CAST STEELS	SC	6 ~ 11	10 ~ 15	6 ~ 11	-	-	2 ~ 5	Water-Soluble Cutting Fluid (Emulsion Type) Non-Water-Soluble Cutting Fluid
CAST IRON	FC	-	-	10 ~ 15	-	10 ~ 20	2 ~ 5	
HIGH TENSION CAST IRON	FCD	7 ~ 12	10 ~ 20	7 ~ 12	-	10 ~ 20	4 ~ 8	Non-Water-Soluble Cutting Fluid (Inactive Type) Water-Soluble Cutting Fluid (Emulsion Type)
COPPER	Cu	6 ~ 11	7 ~ 12	6 ~ 9	7 ~ 12	10 ~ 20	2 ~ 5	
BRASS BRASS CASTING	Bs, BsC	10 ~ 20	15 ~ 25	10 ~ 15	7 ~ 12	15 ~ 25	5 ~ 10	
BRONZE BORNZE CASTING	PB, PBC	6 ~ 11	10 ~ 20	6 ~ 11	7 ~ 12	10 ~ 20	6 ~ 11	
ALUMINUM ROLLED STEELS	AL	10 ~ 20	15 ~ 25	10 ~ 20	10 ~ 20	-	5 ~ 10	
ALUMINUM ALLOY CASTING	AC, ADC	10 ~ 15	15 ~ 20	10 ~ 15	10 ~ 15	10 ~ 20	10 ~ 15	
MAGNESIUM ALLOY CASTING	MC	7 ~ 12	10 ~ 15	7 ~ 12	-	10 ~ 20	10 ~ 15	
ZINC ALLOY CASTING	ZDC	7 ~ 12	10 ~ 15	7 ~ 12	7 ~ 12	10 ~ 20	10 ~ 15	
THERMOSETTING PLASTIC	BAKELITE PHENOL, EPOXY	-	-	10 ~ 20	-	15 ~ 25	5 ~ 10	
THERMOPLASTIC	VINYL CHLORIDE NYLON	10 ~ 15	10 ~ 20	10 ~ 20	-	10 ~ 20	5 ~ 10	

1. These are general recommendations which depending upon conditions, may be altered.
2. To select the best taps, please see Tap Recommended Table.
3. ()=recommendation for HSS-PM taps.

RECOMMENDED TAP DRILL SIZES

For Metric Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M2 x 0.4	1.60	1.679	1.567
M2 x 0.25	1.75	(1.785)	(1.729)
M2.2 x 0.45	1.75	1.838	1.713
M2.2 x 0.25	1.95	(1.985)	(1.929)
M2.2 x 0.4	1.90	1.979	1.867
M2.3 x 0.25	2.05	2.061	2.001
M2.5 x 0.45	2.10	2.138	5.013
M2.5 x 0.35	2.20	2.221	2.121
M2.6 x 0.45	2.20	2.238	2.113
M2.6 x 0.35	2.20	2.246	2.186
M3 x 0.5	2.50	2.599	2.459
M3 x 0.35	2.70	2.721	2.621
M3.5 x 0.6	2.90	3.010	2.850
M3.5 x 0.35	3.20	3.221	3.121
M4 x 0.7	3.30	3.422	3.242
M4 x 0.5	3.50	3.599	3.459
M4.5 x 0.75	3.80	3.878	3.688
M4.5 x 0.5	4.00	4.099	3.959
M5 x 0.8	4.20	4.334	4.134
M5 x 0.5	4.50	4.599	4.459
M6 x 1	5.00	5.153	4.917
M6 x 0.75	5.30	5.378	5.188
M6 x 0.5	5.50	5.550	5.400
M7 x 1	6.00	6.153	5.917
M7 x 0.75	6.30	6.378	6.188
M7 x 0.5	6.50	6.550	6.400
M8 x 1.25	6.80	6.912	6.647
M8 x 1	7.00	7.153	6.917
M8 x 0.75	7.30	7.378	7.188
M8 x 0.5	7.50	7.520	7.400
M9 x 1.25	7.80	7.912	7.647
M9 x 1	8.00	8.153	7.917
M90.75	8.30	8.378	8.188
M10 x 1.5	8.50	8.676	8.376
M10 x 1.25	8.80	8.912	8.647
M10 x 1	9.00	9.153	8.917
M10 x 0.75	9.30	9.378	9.188
M10 x 0.5	9.50	9.520	9.400
M11 x 1.5	9.50	9.676	9.376
M11 x 1	10.00	10.153	9.917
M11 x 0.75	10.30	10.378	10.188
M12 x 1.75	10.30	10.441	10.106
M12 x 1.5	10.50	10.676	10.376
M12 x 1.25	10.80	10.912	10.647
M12 x 1	11.00	11.153	10.917

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M12 x 0.5	11.50	11.520	11.400
M14 x 2	12.00	12.210	11.835
M14 x 1.5	12.50	12.676	12.376
M14 x 1	13.00	13.153	12.917
M15 x 1.5	13.50	13.673	13.376
M15 x 1	14.00	14.153	13.917
M16 x 2	14.00	14.210	13.835
M16 x 1.5	14.50	14.676	14.376
M16 x 1	15.00	15.153	14.917
M17 x 1.5	15.50	15.676	15.376
M17 x 1	16.00	16.153	15.917
M18 x 2.5	15.50	15.744	15.294
M18 x 2	16.00	16.210	15.835
M18 x 1.5	16.50	16.676	16.376
M18 x 1	17.00	17.153	16.917
M20 x 2.5	17.50	17.744	17.294
M20 x 2	18.00	18.210	17.835
M20 x 1.5	18.50	18.676	18.376
M20 x 1	19.00	19.153	18.917
M22 x 2.5	19.50	19.744	19.294
M22 x 2	20.00	20.210	19.835
M22 x 1.5	20.50	20.673	20.376
M22 x 1	21.00	21.153	20.917
M24 x 3	21.00	21.252	20.752
M24 x 2	22.00	22.210	21.835
M24 x 1.5	22.50	22.676	22.376
M24 x 1	23.00	23.153	22.917
M25 x 2	23.00	23.210	22.835
M25 x 1.5	23.50	23.676	23.376
M25 x 1	24.00	24.153	23.917
M26 x 1.5	24.50	24.676	24.376
M27 x 3	24.00	24.252	23.752
M27 x 2	25.00	25.210	24.835
M27 x 1.5	25.50	25.676	25.376
M27 x 1	26.00	26.153	25.917
M28 x 2	26.00	26.210	25.835
M28 x 1.5	26.50	26.676	26.376
M28 x 1	27.00	27.153	26.917
M30 x 3.5	26.50	26.771	26.211
M30 x 3	27.00	27.252	26.752
M30 x 2	28.00	28.210	27.835
M30 x 1.5	28.50	28.676	28.376
M30 x 1	29.00	29.153	28.917
M32 x 2	30.00	30.210	29.835
M32 x 1.5	30.50	30.676	30.376

RECOMMENDED TAP DRILL SIZES

For Metric Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M33 x 3.5	29.50	29.771	29.211
M33 x 3	30.00	30.252	29.752
M33 x 2	31.00	31.210	30.835
M33 x 1.5	31.50	31.676	31.376
M35 x 1.5	33.50	33.676	33.376
M36 x 4	32.00	32.270	31.670
M36 x 3	33.00	33.252	32.752
M36 x 2	34.00	34.210	33.835
M36 x 1.5	34.50	34.676	34.376
M38 x 1.5	36.50	36.676	36.376
M39 x 4	35.00	35.270	34.670
M39 x 3	36.00	36.252	35.752
M39 x 2	37.00	37.210	36.835
M39 x 1.5	37.50	37.676	37.376
M40 x 3	37.00	37.252	36.752
M40 x 2	38.00	38.210	37.835
M40 x 1.5	38.50	38.676	38.376
M42 x 4.5	37.50	37.799	37.129

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M42 x 4	38.00	38.270	37.670
M42 x 3	39.00	39.252	38.752
M42 x 2	40.00	40.210	39.835
M42 x 1.5	40.50	40.676	40.376
M45 x 4.5	40.50	40.799	40.129
M45 x 4	41.00	41.270	40.670
M45 x 3	42.00	42.252	41.752
M45 x 2	43.00	43.210	42.835
M45 x 1.5	43.50	43.676	43.376
M48 x 5	43.00	43.297	42.587
M48 x 4	44.00	44.270	43.670
M48 x 3	45.00	45.252	44.752
M48 x 2	46.00	46.210	45.835
M48 x 1.5	46.50	46.676	46.376
M50 x 3	47.00	47.252	46.752
M50 x 2	48.00	48.210	47.835
M50 x 1.5	48.50	48.676	48.376

D1 : Minor diameter of JIS class internal thread. But, the minor diameter D1 shown in () are of JIS class 1 internal threads because their nominal sizes are not specified in JIS Class 2.

For Unified Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
#2 - 56UNC	1.80	1.871	1.695
#2 - 64UNF	1.85	1.912	1.756
#3 - 48UNC	2.10	2.146	1.941
#3 - 56UNF	2.10	2.197	2.025
#4 - 40UNC	2.30	2.385	2.157
#4 - 48UNF	2.40	2.458	2.271
#5 - 40UNC	2.60	2.697	2.487
#5 - 44UNF	2.70	2.740	2.551
#6 - 32UNC	2.80	2.895	2.642
#6 - 40UNF	2.90	3.022	2.820
#8 - 32UNC	3.40	3.530	3.302
#8 - 36UNF	3.50	3.606	3.404
#10 - 24UNC	3.90	3.962	3.683
#10 - 32UNF	4.10	4.165	3.963
#12 - 24UNC	4.50	4.597	4.344
#12 - 28UNF	4.60	4.724	4.496
#12 - 32UNF	4.70	4.826	4.623
1/4 - 20UNC	5.10	5.257	4.979

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
1/4 - 28UNF	5.50	5.588	5.360
1/4 - 32UNEF	5.60	5.690	5.486
5/16 - 18UNC	6.60	6.731	6.401
5/16 - 24UNF	6.90	7.035	6.782
5/16 - 32UNEF	7.10	7.264	7.087
3/8 - 16UNC	8.00	8.153	7.798
3/8 - 24UNF	8.50	8.636	8.382
3/8 - 32UNEF	8.70	8.865	8.661
7/16 - 14UNC	9.40	9.550	9.144
7/16 - 20UNF	9.90	10.033	9.729
7/16 - 28UNEF	10.20	10.338	10.135
1/2 - 13UNC	10.80	11.023	10.592
1/2 - 20UNF	11.50	11.607	11.329
1/2 - 28UNEF	11.80	11.938	11.709
9/16 - 12UNC	12.20	12.446	11.989
9/16 - 18UNF	12.90	13.081	12.751
9/16 - 24UNEF	13.20	13.386	13.132
5/8 - 11UNC	13.60	13.868	13.386

RECOMMENDED TAP DRILL SIZES

For Unified Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
5/8 - 18UNF	14.50	14.681	14.351
5/8 - 24UNEF	14.80	14.986	14.732
3/4 - 10UNC	16.50	16.840	16.307
3/4 - 16UNF	17.50	17.678	17.323
3/4 - 20UNEF	17.80	17.958	17.678
7/8 - 9UNC	19.50	19.761	19.177
7/8 - 14UNF	20.50	20.675	20.270
7/8 - 20UNEF	21.00	21.133	20.853
1 - 8UNC	22.20	22.606	21.971
1 - 12UNF	23.20	23.571	23.114
1 - 20UNEF	24.00	24.308	24.028
1 1/8 - 7UNC	25.00	25.349	24.638
1 1/8 - 12UNF	26.50	26.746	26.289
1 1/8 - 18UNEF	27.20	27.381	27.051
1 1/8 - 8UN	25.50	25.781	25.146
1 1/4 - 7UNC	28.20	28.524	27.813
1 1/4 - 12UNF	29.50	29.921	29.464
1 1/4 - 18UNEF	30.20	30.556	30.226

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
1 1/4 - 8UN	28.50	28.956	28.321
1 3/8 - 6UNC	30.80	31.115	30.353
1 3/8 - 12UNF	32.80	33.096	32.639
1 3/8 - 18UNEF	33.50	33.731	33.401
1 3/8 - 8UN	31.80	32.131	31.496
1 1/2 - 6UNC	34.00	34.290	33.528
1 1/2 - 12UNF	36.00	36.271	35.814
1 1/2 - 18UNEF	36.50	36.881	36.576
1 1/2 - 8UN	35.00	35.306	34.671
1 5/8 - 18UNEF	39.80	40.081	39.751
1 5/8 - 8UN	38.20	38.481	37.846
1 5/8 - 12UN	39.20	39.446	38.989
1 3/4 - 5UNC	39.50	39.827	38.964
1 3/4 - 8UN	41.20	41.656	41.021
1 3/4 - 12UN	42.20	42.621	42.164
2 - 4.1/2UNC	45.20	45.593	44.679
2 - 8UN	47.80	48.006	47.371
2 - 12UN	48.50	48.971	48.514

D1 : Minor diameter of internal thread.

For UNC and UNF threads, according to JIS Class 2B ;

For UNEF and UN threads, according to ANSI B1, 1a, Class 2B.

For Whitworth Threads

Thread Size	Drill Size (mm)	
	A	B
1/8 W 40	2.65	2.60
5/32 W 32	3.25	3.20
3/16 W 24	3.75	3.70
1/4 W 20	5.10	5.00
5/16 W 18	6.60	6.50
3/8 W 16	8.00	7.90
7/16 W 14	9.40	9.30
1/2 W 12	10.70	10.50
9/16 W 12	12.30	12.00
5/8 W 11	13.70	13.50
3/4 W 10	16.70	16.50

Thread Size	Drill Size (mm)	
	A	B
7/8 W 9	19.50	19.30
1 W 8	22.40	22.00
1 1/8 W 7	25.00	24.80
1 1/4 W 7	28.30	28.00
1 3/8 W 6	30.50	30.30
1 1/2 W 6	33.80	33.50
1 5/8 W 5	36.00	35.70
1 3/4 W 5	39.20	39.00
1 7/8 W 4.1/2	41.80	41.50
2 W 4.1/2	45.00	44.70

Generally the tap drill sizes in column A are used for producing holes ; When holes tend to be cut oversized the tap drill sizes in column B should be Selected.

RECOMMENDED TAP DRILL SIZES

PT Taper Pipe Threads

Thread Size	Drill Size (mm)		Internal Thread Minor Dia. on [Min] Length of Useful Thread (mm)	Internal Thread Minor Dia. on [Min] Gauge Length (mm)
	With Reaming Before Tapping	Without Reaming Before Tapping		
PT 1/16 - 28	6.10	6.20	6.244	6.384
PT 1/8 - 28	8.10	8.20	8.249	8.388
PT 1/4 - 19	10.70	11.00	10.962	11.174
PT 3/8 - 19	14.20	14.50	14.448	14.658
PT 1/2 - 14	17.60	18.00	17.979	18.263
PT 3/4 - 14	23.00	23.50	23.378	23.663
PT 1 - 11	29.00	29.50	29.459	29.822
PT 1.1/4 - 11	37.50	38.00	37.976	38.339
PT 1.1/2 - 11	43.40	44.00	43.869	44.232
PT 2 - 11	54.90	55.50	55.412	55.844

PS Straight Pipe Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
PS 1/16 - 28	6.50	6.632	6.490
PS 1/8 - 28	8.50	8.637	8.495
PS 1/4 - 19	11.40	11.549	11.341
PS 3/8 - 19	15.00	15.054	14.846
PS 1/2 - 14	18.50	18.773	18.489

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
PS 3/4 - 14	24.00	24.259	23.975
PS 1 - 11	30.20	30.471	30.111
PS 1.1/4 - 11	38.80	39.132	38.772
PS 1.1/2 - 11	44.80	45.025	44.665
PS 2 - 11	56.50	56.836	56.476

PF Straight Pipe Threads

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
PF 1/16 - 28	6.70	6.843	6.561
PF 1/8 - 28	8.70	8.848	8.566
PF 1/4 - 19	11.70	11.890	11.445
PF 3/8 - 19	15.20	15.395	14.950
PF 1/2 - 14	19.00	19.172	18.631

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
PF 3/4 - 14	24.50	24.658	24.117
PF 1 - 11	30.50	30.931	30.291
PF 1.1/4 - 11	39.20	39.592	38.952
PF 1.1/2 - 11	45.00	45.485	44.845
PF 2 - 11	57.00	57.296	56.656

RECOMMENDED TAP DRILL SIZES

NPT American Taper Pipe Threads

Thread Size	Drill Size (mm)			
	With Reaming Before Tapping		Without Reaming Before Tapping	
	mm	inch	mm	inch
NPT 1/16 - 27	5.94	0.234	6.15	0.242
NPT 1/8 - 27	8.33	0.328	8.43	0.332
NPT 1/4 - 18	10.72	0.422	11.13	0.438
NPT 3/8 - 18	14.27	0.562	14.27	0.562
NPT 1/2 - 14	17.48	0.688	17.86	0.703
NPT 3/4 - 14	22.63	0.891	23.01	0.906
NPT 1 - 11.1/2	28.58	1.125	28.98	1.141
NPT 1.1/4 - 11.1/2	37.31	1.469	37.69	1.484
NPT 1.1/2 - 11.1/2	43.26	1.703	43.66	1.719
NPT 2 - 11.1/2	55.17	2.172	55.58	2.188
NPT 2 1/2 - 8	65.48	2.578	66.27	2.609

NPTF Dryseal American Taper Pipe Threads

Thread Size	Drill Size (mm)			
	With Reaming Before Tapping		Without Reaming Before Tapping	
	mm	inch	mm	inch
NPTF 1/16 - 27	5.94	0.234	6.15	0.242
NPTF 1/8 - 27	8.33	0.328	8.43	0.332
NPTF 1/4 - 18	10.72	0.422	11.13	0.438
NPTF 3/8 - 18	14.27	0.562	14.27	0.562
NPTF 1/2 - 14	17.48	0.688	17.86	0.703
NPTF 3/4 - 14	22.63	0.891	23.01	0.906
NPTF 1 - 11.1/2	28.58	1.125	28.98	1.141
NPTF 1.1/4 - 11.1/2	37.31	1.469	37.69	1.484
NPTF 1.1/2 - 11.1/2	43.26	1.703	43.66	1.719
NPTF 2 - 11.1/2	55.17	2.172	55.58	2.188
NPTF 2 1/2 - 8	65.48	2.578	66.27	2.609

For Metric Screw Threads Insert

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M3 x 0.5	3.10	3.20	3.12
M4 x 0.7	4.20	4.30	4.17
M5 x 0.8	5.20	5.33	5.16
M6 x 1	6.30	6.42	6.25
M8 x 1.25	8.40	8.52	8.31
M10 x 1.5	10.50	10.62	10.37
M10 x 1.25	10.40	10.52	10.31
M10 x 1	10.30	10.42	10.25
M12 x 1.75	12.50	12.73	12.43
M12 x 1.5	12.50	12.62	12.37
M12 x 1.25	12.50	12.52	12.31
M14 x 2	14.50	14.83	14.49

Thread Size	Drill Size (mm)	D1 (mm)	
		Max.	Min.
M14 x 1.5	14.50	14.62	14.37
M16 x 2	16.50	16.83	16.49
M16 x 1.5	16.50	16.62	16.37
M18 x 2.5	19.00	19.04	18.58
M18 x 1.5	18.50	18.62	18.37
M20 x 2.5	21.00	21.01	20.58
M20 x 1.5	20.50	20.62	20.37
M22 x 2.5	23.00	23.04	22.58
M22 x 1.5	22.50	22.62	22.37
M24 x 3	25.00	25.25	24.70
M24 x 2	24.50	24.83	24.47
M24 x 1.5	24.50	24.62	24.37

RECOMMENDED TAP DRILL SIZES

For Fluteless Taps

Thread Size	Drill Size (mm)							
	Tap Limits							
	GH4	GH5	GH6	GH7	GH8	GH9	GH10	GH11
M2 x 0.4	1.83	1.84	---	---	---	---	---	---
M2.2 x 0.45	2.00	2.01	---	---	---	---	---	---
M2.3 x 0.4	2.13	2.14	---	---	---	---	---	---
M2.5 x 0.45	2.30	2.31	---	---	---	---	---	---
M2.6 x 0.45	2.40	2.41	---	---	---	---	---	---
M3 x 0.5	2.77	2.78	2.79	2.81	---	---	---	---
M3 x 0.35	2.85	2.87	2.88	2.89	---	---	---	---
M3.5 x 0.6	---	3.23	3.24	3.25	---	---	---	---
M4 x 0.7	---	3.67	3.68	3.70	---	---	---	---
M4 x 0.5	---	3.78	3.79	3.81	---	---	---	---
M5 x 0.8	---	4.61	4.63	4.64	---	---	---	---
M5 x 0.5	---	4.78	4.79	4.81	---	---	---	---
M6 x 1	---	5.50	5.51	5.53	---	---	---	---
M6 x 0.75	---	5.64	5.65	5.67	---	---	---	---
M6 x 0.5	---	5.78	5.79	5.81	---	---	---	---
M7 x 1	---	6.50	6.51	6.53	---	---	---	---
M8 x 1.25	---	---	7.37	7.39	7.40	---	---	---
M8 x 1	---	---	7.51	7.53	7.54	---	---	---
M10 x 1.5	---	---	9.23	9.24	9.26	9.27	---	---
M10 x 1.25	---	---	9.37	9.39	9.40	9.41	---	---
M10 x 1	---	---	9.51	9.53	9.54	9.55	---	---
M12 x 1.75	---	---	---	11.10	11.12	11.13	11.14	---
M12 x 1.5	---	---	---	11.24	11.26	11.27	11.28	---
M12 x 1.25	---	---	---	11.39	11.40	11.41	11.42	---
M12 x 1	---	---	---	11.53	11.54	11.55	11.56	---
M14 x 2	---	---	---	---	12.98	12.99	13.00	13.01
M14 x 1.5	---	---	---	---	13.26	13.27	13.28	13.30
M14 x 1	---	---	---	---	13.54	13.55	13.56	13.58
M16 x 2	---	---	---	---	14.98	14.99	15.00	15.01
M16 x 1.5	---	---	---	---	14.26	15.27	15.28	15.30
M16 x 1	---	---	---	---	15.54	15.55	15.56	15.58
M18 x 2.5	---	---	---	---	---	16.71	16.72	16.73
M18 x 1.5	---	---	---	---	---	17.27	17.28	17.30
M20 x 2.5	---	---	---	---	---	---	18.72	18.73
M20 x 1.5	---	---	---	---	---	---	19.28	19.30

For Fluteless Taps

Thread Size	Drill Size (mm)							
	Tap Limits							
	GH4	GH5	GH6	GH7	GH8	GH9	GH10	GH11
#2 - 56 UNC	---	1.99	2.01	---	---	---	---	---
#4 - 40 UNC	---	2.55	2.56	2.58	---	---	---	---
#5 - 40 UNC	---	2.88	2.89	2.91	---	---	---	---
#6 - 32 UNC	---	3.12	3.13	3.15	3.16	---	---	---
#8 - 32 UNC	---	---	3.80	3.81	3.82	---	---	---
#10 - 24 UNC	---	---	---	4.32	4.33	4.34	---	---
#12 - 24 UNC	---	---	---	4.98	4.99	5.01	---	---
1/4 - 20 UNC	---	---	---	5.72	5.74	5.75	---	---

SYMBOL USED FOR STANDARD THREADS (PARTIAL LISTING)

For Fluteless Taps

Thread Symbol	Thread		Reference Standard	Thread Angle
M	Metric screw threads	Coarse series	JIS B 0205	60°
		Fine series	JIS B 0207	
S	Metric screw threads		JIS B 0201	
			JIS B 0206	
UNC	Unified threads	Coarse series	ANSI B1.1	
UNF		Fine series	JIS B 0208	
UNEF		Extra-fine series	ANSI B1.1	
UNS		Special diameter, pitch, & length of engagement		
UN		Constant-pitch series		
UNJC	Unified threads (MIL Standard)	Coarse series	MIL-S-8879	
UNJF		Fine series		
UNJEF		Extra-fine series		
UNJ		Constant-pitch series		
Tr	Metric trapezoidal screw threads		JIS B 0216	30°
TM	30° Trapezoidal screw threads		JIS B 0216 Appendix	
TW	29° Trapezoidal screw threads		JIS B 0222	29°
R	Pipe threads where pressure-tight joints are made on the threads	Taper external pipe threads	JIS B 0203	55° 1/16 Taper
Rc		Taper internal pipe threads		
Rp		Parallel internal pipe threads		
G	Pipe threads where pressure-tight joints are not made on the threads		JIS B 0202	55°
PF	Parallel pipe threads (For mechanical joints)		JIS B 0202 Appendix	55° 1/16 Taper 55°
PT	Taper pipe threads	(For pressure-tight joints)	JIS B 0203 Appendix	
PS	Parallel pipe threads			
NPT	American Standard taper pipe threads for general use		ANSI/ASEM B1.20.1	60° 1/16 Taper
NPSC	American Standard straight pipe threads in pipe couplings			
NPSM	American Standard straight pipe threads for free-fitting mechanical joints for fixtures			60°
NPTF	Dryseal American Standard taper pipe threads		ANSI B1.20.3	60° 1/16 Taper
NPSF	Dryseal American Standard fuel internal straight pipe threads			60°
CTG	Screw threads for rigid metal thick-walled conduits and fittings		JIS B 0204	55°
CTC	Screw threads for rigid metal thin-walled conduits and fittings			80°
BC	Cycle threads		JIS B 0225	60°
SM	Screw threads for sewing machine		JIS B 0226	
CTV	Tyre valve threads of cycle		JIS D 9422	
TV	Tyre valve threads of automobile		JIS D 4208	
E	Electric socket and lamp-base threads		JIS C 7709	
BA	British association threads		BS 93	47° 30'
BSC	British Standard cycle threads		BS 811	60°
BSW	British Standard Whitworth threads		BS 84	55°
BSF	British Standard fine threads			
BSMO	British Standard microscope objective threads		BS 3569	
FG	(Germany) Cycle threads		DIN 79012	80°
Pg	(Germany) Steel conduit threads		DIN 40430	80°

HARDNESS CONVERSION TABLE

Rockwell ★ C. Scale Hardness	Vickers Hardness	Brinell Hardness	Rockwell A. Scale Hardness	Shore Hardness	Tensile Strength ★★ MPa (Kgf/mm ²)
58	653	---	80.1	78	---
57	633	---	79.6	76	---
56	613	---	79.0	75	---
55	595	---	78.5	74	2075 (212)
54	577	---	78.0	72	2015 (205)
53	560	---	77.4	71	1950 (199)
52	544	(500)	76.8	69	1880 (192)
51	528	(487)	76.3	68	1820 (186)
50	513	(475)	75.9	67	1760 (179)
49	498	(464)	75.2	66	1695 (173)
48	484	451	74.7	64	1635 (167)
47	471	442	74.1	63	1580 (161)
46	458	432	73.6	62	1530 (156)
45	446	421	73.1	60	1480 (151)
44	434	409	72.5	58	1435 (146)
43	423	400	72.0	57	1385 (141)
42	412	390	71.5	56	1340 (136)
41	402	381	70.9	55	1295 (132)
40	392	371	70.4	54	1250 (127)
39	382	362	69.9	52	1215 (124)
38	372	353	69.4	51	1180 (120)
37	363	344	68.9	50	1160 (118)
36	354	336	68.4	49	1115 (114)
35	345	327	67.9	48	1080 (110)
34	336	319	67.4	47	1055 (108)
33	327	311	66.8	46	1025 (105)
32	318	301	66.3	44	1000 (102)
31	310	294	65.8	43	980 (100)
30	302	286	65.3	42	950 (97)
29	294	279	64.7	41	930 (95)
28	286	271	64.3	41	910 (93)
27	279	264	63.8	40	880 (90)
26	272	258	63.3	38	860 (88)
25	266	253	62.8	38	840 (86)
24	260	247	62.4	37	825 (84)
23	254	243	62.0	36	805 (82)
22	248	237	61.5	35	785 (80)
21	243	231	61.0	35	770 (79)
20	238	226	60.5	34	760 (77)
(18)	230	219	---	33	730 (75)
(16)	222	212	---	32	705 (72)
(14)	213	203	---	31	675 (69)
(12)	204	194	---	29	650 (66)
(10)	196	187	---	28	620 (63)
(8)	188	179	---	27	600 (61)
(6)	180	171	---	26	580 (59)
(4)	173	165	---	25	550 (56)
(2)	166	158	---	24	530 (54)
(0)	160	152	---	24	515 (53)

● Hardness conversions should only be used as a rough guide due to variation for different materials.

Figures shown in bold type are based on ASTM E 140 (which being adjusted commonly by SAE-ASM-ASTM).

★ Figure shown in () are provided for reference only.

★★ The unit of tensile strength and figures in () are converted from psi values by using conversion tables in JIS Z 8413 & Z 8438. This table is according to SAE J 417 (partial listing).