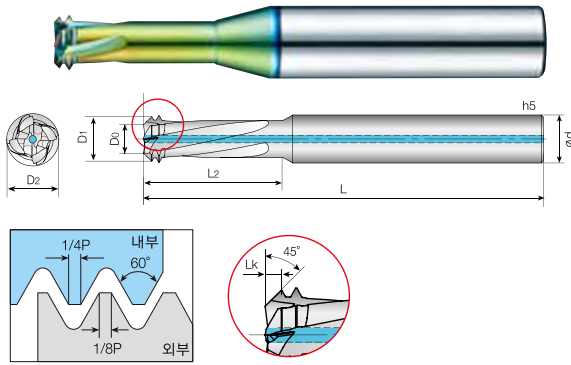


4날 범용 다기능 쓰레드밀 (역회전)



ISO 측정항목

519P

- HRC 40이하의 고강도강, 프러하든강, 합금강, 탄소강, 주철가공
 - 4ETM 공구는 하나의 공구로 드릴, 나사 및 챔퍼 작업을 모두 수행합니다.
 - 탭 가공을 위한 기조출 작업은 더 이상 필요하지 않습니다.
 - 다기능 공구로 막힌구멍, 관통구멍, 경사진 곡면에서도 사용이 가능합니다.
 - 원활한 칩 배출을 위해 2D이상의 기조출이 없는 경우 내부 급유형을 추천 합니다.
 - 헬리코일 나사 가공이 가능합니다.
 - 공구의 주축회전은 역 방향(M4)이고, 진행방향은 정 방향으로 진행 됩니다.
-
- **Threading mills for hardened steels, alloy steels, carbon steels, cast irons**
 - With one 4ETM tool, it's available for drilling, threading and chamfering all together.
 - Pre-drilling for tapping is no longer needed.
 - It can also be used on blocked holes, penetrating holes, and sloping curved surfaces as multi-function tool.
 - If the diameter of hole is longer than 2D without pre-drilled hole, use the tool with coolant for the better chip emission.
 - It can be used for heli coil threading.
 - The main direction of tool rotation is left-handed (M4) and the direction of threading is right-handed.

단위 Unit: mm

[illegible]

내부급유형 (With coolant)

[illegible]

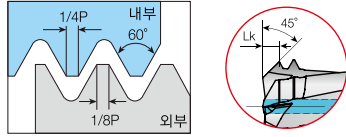
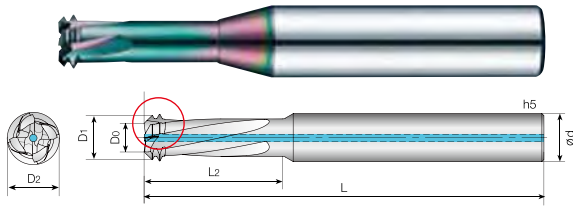
American UN

단위 Unit: mm

[illegible]

내부급유형 (With coolant)

[illegible]



ISO 측정항목

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단위 Unit: mm

Order Number	피치규격		날수 Flutes Z	산수 Teeth Zt	날경 Diameter			유효장 Effective Length L2	길이 Lk	전장 Overall Length L	샹크 Shank Dia d
	Thread	Pitch			D0	D1	D2				
4ETMA 0105 033 S04 M014	M1.4	0.3	4	2	0.61	0.95	1.05	3.3	0.17	45	4
4ETMA 0105 040 S04 M014	M1.4	0.3	4	2	0.61	0.95	1.05	4	0.17	45	4
4ETMA 012 037 S04 M016	M1.6~M1.8	0.35	4	2	0.65	1.04	1.2	3.7	0.195	45	4
4ETMA 012 045 S04 M016	M1.6~M1.8	0.35	4	2	0.65	1.04	1.2	4.5	0.195	45	4
4ETMA 0155 045 S04 M2	M2	0.4	4	2	0.94	1.4	1.55	4.5	0.23	45	4
4ETMA 0155 055 S04 M2	M2	0.4	4	2	0.94	1.4	1.55	5.5	0.23	45	4
4ETMA 020 055 S04 M025	M2.5~M2.6	0.45	4	2	1.16	1.85	2	5.5	0.345	45	4
4ETMA 020 0675 S04 M025	M2.5~M2.6	0.45	4	2	1.16	1.85	2	6.75	0.345	45	4
4ETMA 024 070 S06 M3	M3	0.5	4	2	1.37	2.17	2.4	7	0.4	60	6
4ETMA 024 085 S06 M3	M3	0.5	4	2	1.37	2.17	2.4	8.5	0.4	60	6
4ETMA 032 092 S06 M4	M4	0.7	4	2	1.74	2.88	3.2	9.2	0.57	60	6
4ETMA 032 112 S06 M4	M4	0.7	4	2	1.74	2.88	3.2	11.2	0.57	60	6
4ETMA 039 115 S06 M5	M5	0.8	4	2	2.21	3.61	3.9	11.5	0.7	60	6
4ETMA 039 144 S06 M5	M5	0.8	4	2	2.21	3.61	3.9	14.4	0.7	60	6
4ETMA 047 140 S06 M6	M6~M9	1	4	2	2.82	4.4	4.7	14	0.79	60	6
4ETMA 047 170 S06 M6	M6~M9	1	4	2	2.82	4.4	4.7	17	0.79	60	6
4ETMA 061 180 S08 M8	M8~M12	1.25	4	2	4	5.8	6.1	18	0.9	65	8
4ETMA 061 220 S08 M8	M8~M12	1.25	4	2	4	5.8	6.1	22	0.9	65	8
4ETMA 078 230 S08 M10	M10~M15	1.5	4	2	5.16	7.4	7.8	23	1.12	65	8
4ETMA 078 280 S08 M10	M10~M15	1.5	4	2	5.16	7.4	7.8	28	1.12	65	8
4ETMA 090 260 S10 M12	M12	1.75	4	2	6.2	8.6	9	26	1.2	80	10
4ETMA 090 330 S10 M12	M12	1.75	4	2	6.2	8.6	9	33	1.2	80	10
4ETMA 118 350 S12 M16	M16~M23	2	4	2	7.4	11.4	11.8	35	2	100	12
4ETMA 118 430 S12 M16	M16~M23	2	4	2	7.4	11.4	11.8	43	2	100	12

외부 급유형 (Without coolant)

내부 급유형 (With coolant)

4ETMA 047 140 S06 M6C	M6~M9	1	4	2	2.82	4.4	4.7	14	0.79	60	6
4ETMA 047 170 S06 M6C	M6~M9	1	4	2	2.82	4.4	4.7	17	0.79	60	6
4ETMA 061 180 S08 M8C	M8~M12	1.25	4	2	4	5.8	6.1	18	0.9	65	8
4ETMA 061 220 S08 M8C	M8~M12	1.25	4	2	4	5.8	6.1	22	0.9	65	8
4ETMA 078 230 S08 M10C	M10~M15	1.5	4	2	5.16	7.4	7.8	23	1.12	65	8
4ETMA 078 280 S08 M10C	M10~M15	1.5	4	2	5.16	7.4	7.8	28	1.12	65	8
4ETMA 090 260 S10 M12C	M12	1.75	4	2	6.2	8.6	9	26	1.2	80	10
4ETMA 090 330 S10 M12C	M12	1.75	4	2	6.2	8.6	9	33	1.2	80	10
4ETMA 118 350 S12 M16C	M16~M23	2	4	2	7.4	11.4	11.8	35	2	100	12
4ETMA 118 430 S12 M16C	M16~M23	2	4	2	7.4	11.4	11.8	43	2	100	12

American UN

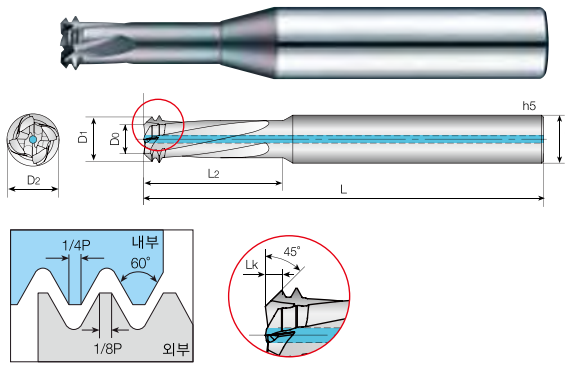
단위 Unit: mm

[illegible]

내부급유형 (With coolant)

[illegible]

4날 SUS 가공용 다기능 쓰레드밀 (역회전)



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단위 Unit: mm

Order Number	피치규격		날수	산수	날경			유효장	길이	전장	샙크
	Thread	Pitch	Flutes	Teeth	Diameter			Effective Length	Lk	Overall Length	Shank Dia
			Z	Zt	D0	D1	D2	L2		L	d

외부 급유형 (Without coolant)

[illegible]

내부 급유형 (With coolant)

[illegible]

THREAD MILL

American UN

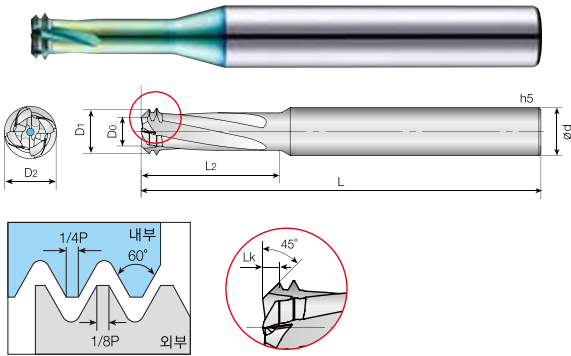
단위 Unit: mm

[illegible]

내부급유형 (With coolant)

[illegible]

범용 다기능 조각기용 쓰레드밀 (정회전)



- **HRC 40이하의 고경도강, 프리하든강, 합금강, 탄소강, 주철가공**
- 4ETMR 공구는 하나의 공구로 드릴, 나사 및 챔퍼 작업 모두 수행합니다.
- 조각기용으로 공구의 주축회전과 진행방향 모두 정 방향(M3)으로 진행 됩니다.
- 탭 가공을 위한 기조 홈 작업은 더 이상 필요하지 않습니다.
- 다양한 공구로 막힌구멍, 관통구멍, 경사진 곡면에서도 사용이 가능합니다.
- 헬리코일 나사 가공이 가능합니다.

- Thread mills for Hardened steels (up to HRC 40), pre-hardened steels, alloy steels, carbon steels, cast irons
- With one 4ETMR tool, it's available for drilling, threading, and chamfering all together.
- For engraving purpose, the main direction of tool rotation and the direction of threading are right-handed (M3).
- Pre-drilling for tapping is no longer needed.
- It can also be used on blocked holes, penetrating holes, and sloping curved surfaces as multi-function tool.
- It can be used for heli coil threading.



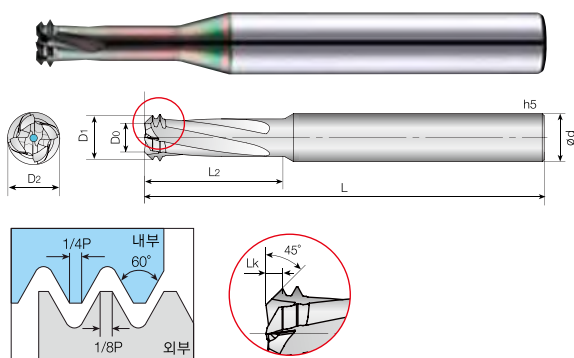
519P

ISO 측정항목

단위 Unit: mm

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알루미늄 전용 다기능 조각기용 쓰레드밀 (정회전)



- **알루미늄, 알루미늄 합금 등 비철 비금속 가공**
 - 4ETMRA 공구는 하나의 공구로 드릴, 나사 및 챔퍼 작업 모두 수행합니다.
 - 조각가공으로 공구의 주축회전과 진행방향 모두 정 방향(M3)으로 진행 됩니다.
 - 탭 가공을 위한 기초 홀 작업은 더 이상 필요하지 않습니다.
 - 다기능 공구로 막힌구멍, 관통구멍, 경사진 곡면에서도 사용이 가능합니다.
 - 헬리코일 나사 가공이 가능합니다.
-
- **Thread mills for Aluminum, Aluminum alloys, non-ferrous, and non-metallic materials**
 - With one 4ETMRA tool, it's available for drilling, threading, and chamfering all together.
 - For engraving purpose, the main direction of tool rotation and the direction of threading are right-handed (M3).
 - Pre-drilling for tapping is no longer needed.
 - It can also be used on blocked holes, penetrating holes, and sloping curved surfaces as multi-function tool.
 - It can be used for heli coil threading.

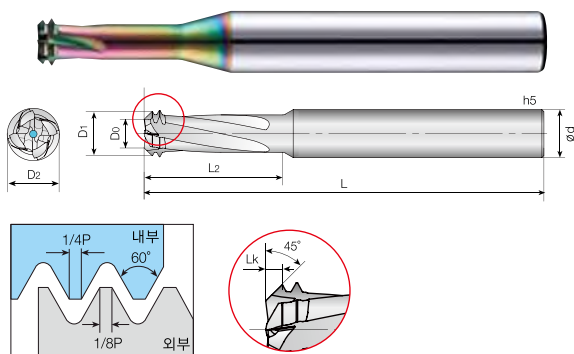


ISO 측정항목

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단위 Unit: mm

[illegible]



- SUS, 티타늄합금 가공

- 4ETMRS 공구는 하나의 공구로 드릴, 나사 및 챔퍼 작업 모두 수행합니다.
- 조각가공으로 공구의 주축회전과 진행방향 모두 정 방향(M3)으로 진행 됩니다.
- 탭 가공을 위한 기조 홀 작업은 더 이상 필요하지 않습니다.
- 다기능 공구로 막힘구멍, 관통구멍, 경사진 곡면에서도 사용이 가능합니다.
- 헬리코일 나사 가공이 가능합니다.

- Thread Mills for Stainless and Titanium alloys

- With one 4ETMRS tool, it's available for drilling, threading, and chamfering all together.
- For engraving purpose, the main direction of tool rotation and the direction of threading are right-handed (M3).
- Pre-drilling for tapping is no longer needed.
- It can also be used on blocked holes, penetrating holes, and sloping curved surfaces as multi-function tool.
- It can be used for heli coil threading.

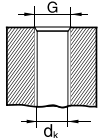
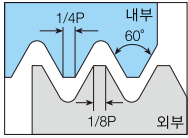
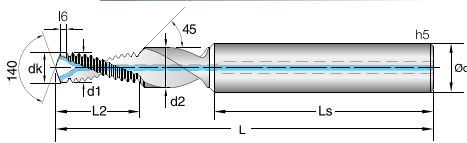


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ISO 측정항목

단위 Unit: mm

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ISO 측정항목

단위 Unit: mm

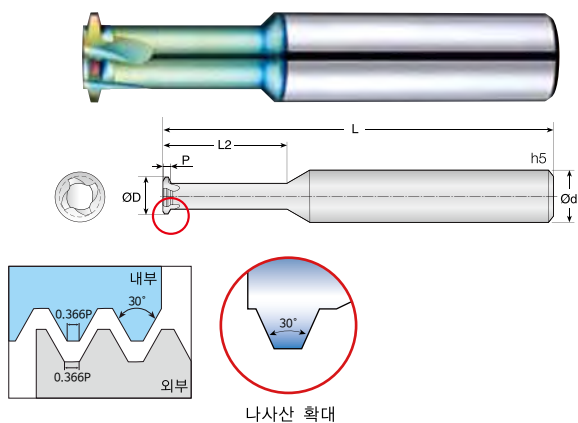
Order Number		피치규격		드릴직경	외경	목부직경	유효장	생크길이	드릴길이	전장	생크
비코팅 Un coated	코팅 Coated	Thread	Pitch	Drill Dia dk	Cutter Dia d1	Max C sink d2	Effective Length L2	Shank Length Ls	Drill Length L6	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

2DTM 011 0276 M014	2DTMC 011 0276 M014	M1.4	0.3	1.1	1.05	1.55	2.76	33	0.2	45	4
2DTM 011 0367 M014	2DTMC 011 0367 M014	M1.4	0.3	1.1	1.05	1.55	3.67	33	0.2	45	4
2DTM 0125 032 M016	2DTMC 0125 032 M016	M1.6	0.35	1.25	1.2	1.75	3.2	33	0.25	45	4
2DTM 0125 0425 M016	2DTMC 0125 0425 M016	M1.6	0.35	1.25	1.2	1.75	4.25	33	0.25	45	4
2DTM 0145 0358 M018	2DTMC 0145 0358 M018	M1.8	0.35	1.45	1.4	2	3.58	33	0.25	45	4
2DTM 0145 0463 M018	2DTMC 0145 0463 M018	M1.8	0.35	1.45	1.4	2	4.63	33	0.25	45	4
2DTM 016 0448 M2	2DTMC 016 0448 M2	M2	0.4	1.6	1.55	2.25	4.48	32	0.3	45	4
2DTM 016 0568 M2	2DTMC 016 0568 M2	M2	0.4	1.6	1.55	2.25	5.68	32	0.3	45	4
2DTM 0205 0554 M025	2DTMC 0205 0554 M025	M2.5	0.45	2.05	2	2.85	5.54	30.5	0.35	45	4
2DTM 0205 0689 M025	2DTMC 0205 0689 M025	M2.5	0.45	2.05	2	2.85	6.89	30.5	0.35	45	4
2DTM 0215 0554 M026	2DTMC 0215 0554 M026	M2.6	0.45	2.15	2.1	2.95	5.54	30.5	0.35	45	4
2DTM 0215 0691 M026	2DTMC 0215 0691 M026	M2.6	0.45	2.15	2.1	2.95	6.91	30.5	0.35	45	4
2DTM 025 067 S06 M3	2DTMC 025 067 S06 M3	M3	0.5	2.5	2.45	3.4	6.7	36	0.4	50	6
2DTM 025 082 S06 M3	2DTMC 025 082 S06 M3	M3	0.5	2.5	2.45	3.4	8.2	36	0.4	50	6
2DTM 033 087 S06 M4	2DTMC 033 087 S06 M4	M4	0.7	3.3	3.25	4.5	8.7	36	0.6	50	6
2DTM 033 108 S06 M4	2DTMC 033 108 S06 M4	M4	0.7	3.3	3.25	4.5	10.8	36	0.6	50	6
2DTM 042 109 S06 M5	2DTMC 042 109 S06 M5	M5	0.8	4.2	4	5.5	10.9	36	0.7	55	6
2DTM 042 133 S06 M5	2DTMC 042 133 S06 M5	M5	0.8	4.2	4	5.5	13.3	36	0.7	55	6
2DTM 050 137 S08 M6	2DTMC 050 137 S08 M6	M6	1	5	4.75	6.6	13.7	36	1	60	8
2DTM 050 167 S08 M6	2DTMC 050 167 S08 M6	M6	1	5	4.75	6.6	16.7	36	1	60	8
2DTM 068 184 S10 M8	2DTMC 068 184 S10 M8	M8	1.25	6.8	6.35	9	18.4	40	1.2	75	10
2DTM 068 221 S10 M8	2DTMC 068 221 S10 M8	M8	1.25	6.8	6.35	9	22.1	40	1.2	75	10
2DTM 085 222 S12 M10	2DTMC 085 222 S12 M10	M10	1.5	8.5	7.95	11	22.2	45	1.5	80	12
2DTM 085 267 S12 M10	2DTMC 085 267 S12 M10	M10	1.5	8.5	7.95	11	26.7	45	1.5	80	12
2DTM 102 255 S14 M12	2DTMC 102 255 S14 M12	M12	1.75	10.2	9.95	13.5	25.5	45	1.5	90	14
2DTM 102 308 S14 M12	2DTMC 102 308 S14 M12	M12	1.75	10.2	9.95	13.5	30.8	45	1.5	90	14
2DTM 120 312 S16 M14	2DTMC 120 312 S16 M14	M14	2	12	11.2	15.5	31.2	48	1.5	100	16
2DTM 120 392 S16 M14	2DTMC 120 392 S16 M14	M14	2	12	11.2	15.5	39.2	48	1.5	100	16
2DTM 140 355 S18 M16	2DTMC 140 355 S18 M16	M16	2	14	13.2	17.5	35.5	48	1.5	100	18
2DTM 140 435 S18 M16	2DTMC 140 435 S18 M16	M16	2	14	13.2	17.5	43.5	55.7	1.5	115	18

내부 급유형 (With coolant)

2DTM 042 109 S06 M5C	2DTMC 042 109 S06 M5C	M5	0.8	4.2	4	5.5	10.9	36	0.7	55	6
2DTM 042 133 S06 M5C	2DTMC 042 133 S06 M5C	M5	0.8	4.2	4	5.5	13.3	36	0.7	55	6
2DTM 050 137 S08 M6C	2DTMC 050 137 S08 M6C	M6	1	5	4.75	6.6	13.7	36	1	60	8
2DTM 050 167 S08 M6C	2DTMC 050 167 S08 M6C	M6	1	5	4.75	6.6	16.7	36	1	60	8
2DTM 068 184 S10 M8C	2DTMC 068 184 S10 M8C	M8	1.25	6.8	6.35	9	18.4	40	1.2	75	10
2DTM 068 221 S10 M8C	2DTMC 068 221 S10 M8C	M8	1.25	6.8	6.35	9	22.1	40	1.2	75	10
2DTM 085 222 S12 M10C	2DTMC 085 222 S12 M10C	M10	1.5	8.5	7.95	11	22.2	45	1.5	80	12
2DTM 085 267 S12 M10C	2DTMC 085 267 S12 M10C	M10	1.5	8.5	7.95	11	26.7	45	1.5	80	12
2DTM 102 255 S14 M12C	2DTMC 102 255 S14 M12C	M12	1.75	10.2	9.95	13.5	25.5	45	1.5	90	14
2DTM 102 308 S14 M12C	2DTMC 102 308 S14 M12C	M12	1.75	10.2	9.95	13.5	30.8	45	1.5	90	14
2DTM 120 312 S16 M14C	2DTMC 120 312 S16 M14C	M14	2	12	11.2	15.5	31.2	48	1.5	100	16
2DTM 120 392 S16 M14C	2DTMC 120 392 S16 M14C	M14	2	12	11.2	15.5	39.2	48	1.5	100	16
2DTM 140 355 S18 M16C	2DTMC 140 355 S18 M16C	M16	2	14	13.2	17.5	35.5	48	1.5	100	18
2DTM 140 435 S18 M16C	2DTMC 140 435 S18 M16C	M16	2	14	13.2	17.5	43.5	55.7	1.5	115	18

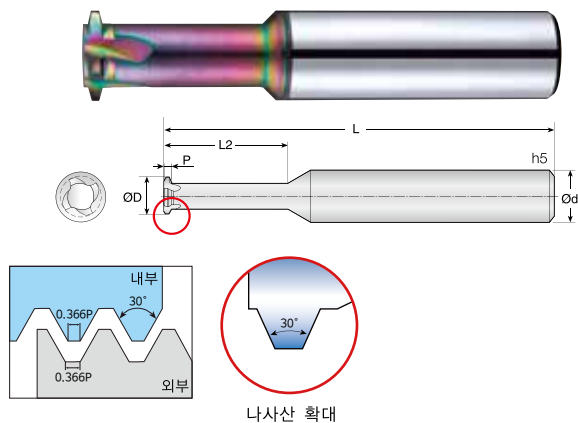


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ISO 측정항목

단위 Unit: mm

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- **SUS, 티타늄합금 가공**
- 동력 전달용 미터게 30° 사다리꼴 나사 가공 전용
- 소구경 크기의 깊은홀의 나사가공에 사용할 수 있습니다.
- 프로파일에 따라 나사산 깊이는 최대가 될 수 있습니다.
- 하나의 나사산으로 구멍되어 다양한 PITCH의 나사 가공이 가능합니다.
- 다양한 피삭재의 하나의 나사산으로 여러번의 절삭이 가능하여 안정적입니다.

- **Thread mills for SUS and Titanium alloys**
- For power transmission meter 30° trapezoidal thread milling.
- It can be used for threading deep holes the size of a small diameter.
- Depending on the profile, thread depth can be maximum
- Composed of a single thread, it performs various pitch thread milling.
- Available for multiple milling of various materials with one thread ensuring stability



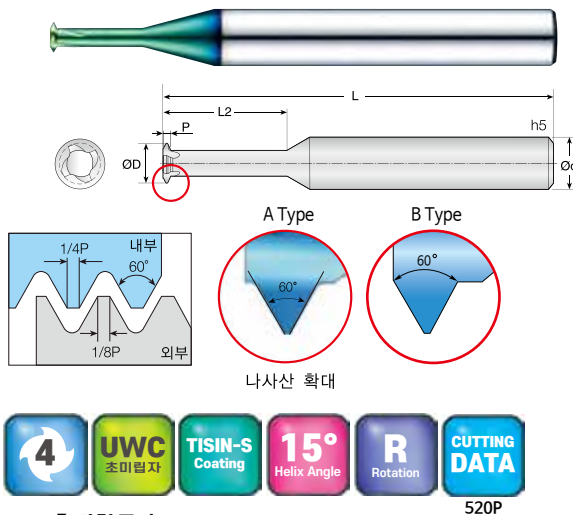
ISO 측정항목

519P

단위 Unit: mm

[illegible]

4날 범용 다기능 쓰레드밀(1나사산)



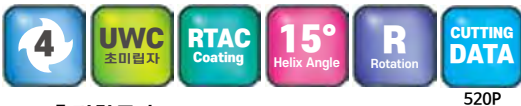
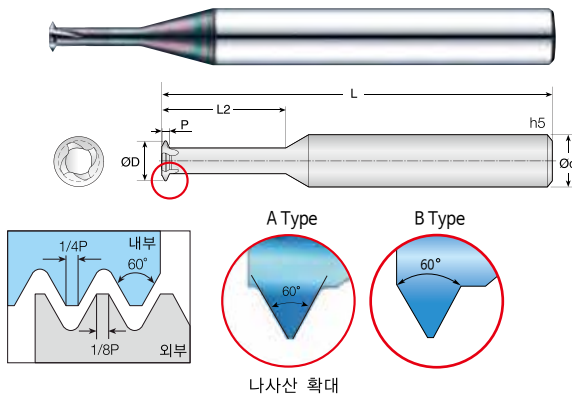
- **HRC58이하의 열처리강, 프리하드강, 합금강, 탄소강, 주철 가공**
 - 60° 미터나사 / 관용나사 / 유니파이 나사가공 전용
 - 소구경 크기의 깊은홀의 나사가공에 사용할 수 있습니다.
 - 프로파일에 따라 나사산 깊이는 최대가 될 수 있습니다.
 - 하나의 나사산으로 구성되어 다양한 PITCH와 테이퍼 나사 가공이 가능합니다.
 - 오른나사와 왼나사 작업이 모두 가능합니다.
 - 헬리코일 나사 가공이 가능합니다.
-
- **Machining of heat-treated steels pre-hardened steels, alloy steels, carbon steels, and cast irons with HRC58 or below**
 - Specifically designed for 60° metric threads, NPT threads, and UN threads.
 - Suitable for threading deep holes with small diameters.
 - Maximum thread depth can be achieved based on the profile.
 - Configured with a single tap, allowing for various PITCH and taper threading operations.
 - Suitable for both right-hand and left-hand threading.
 - It can be used for heli coil threading.

ISO 측정항목 / American UN

단위 Unit: mm

[illegible]

4날 알루미늄 전용 다기능 쓰레드밀(1나사산)



ISO 측정항목 / American UN

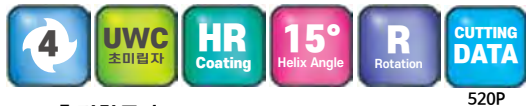
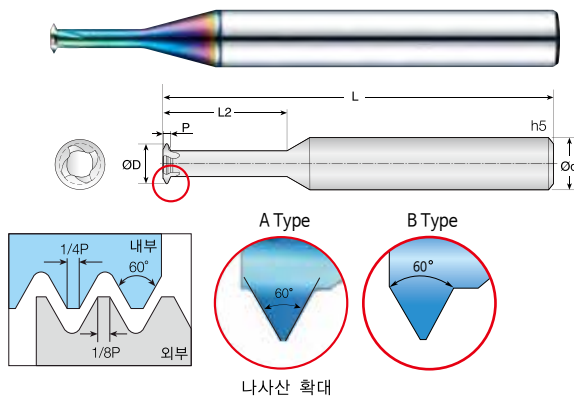
단위 Unit: mm

Order Number	미터나사 (Metric screw)		유니파이나사			날수 Flutes Z	타입 Type	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	일반 나사 M Coarse	가는 나사 M Fine	Unified screw								
			UNC	UNF	UNS						
1	M3					2	A	3	10	12	3
2	M4					2	A	4	16	20	4
3	M5					2	A	5	20	25	5
4	M6					2	A	6	24	30	6
5	M8					2	A	8	32	40	8
6	M10					2	A	10	40	50	10
7	M12					2	A	12	48	60	12
8	M16					2	A	16	64	80	16
9	M20					2	A	20	80	100	20
10	M25					2	A	25	100	125	25
11	M30					2	A	30	120	150	30
12	M36					2	A	36	144	180	36
13	M42					2	A	42	168	210	42
14	M48					2	A	48	192	240	48
15	M56					2	A	56	224	280	56
16	M64					2	A	64	256	320	64
17	M72					2	A	72	288	360	72
18	M80					2	A	80	320	400	80
19	M90					2	A	90	360	450	90
20	M100					2	A	100	400	500	100

외부 급유형 (Without coolant)

[illegible]

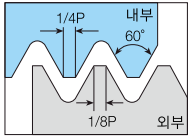
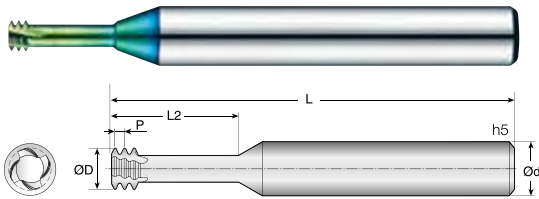
4날 SUS 가공용 다기능 쓰레드밀(1나사산)



ISO 측정항목 / American UN

단위 Unit: mm

[illegible]



- HRc 58이하의 열처리강, 프리하든강, 합금강, 탄소강, 주철 가공
- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩제거를 통해 공구 성능을 향상 시킵니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.
- 헬리코일 나사 가공이 가능합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

- Thread mills for Hardened steels (up to HRc 58), pre-hardened steels, alloy steels, carbon steels, cast irons
- Powerful flute design applied for hardened steel.
- Improved cutting and chip removal reduce the risk of tool breaking in holes.
- The tip shape reduces cutting resistance and tool bend.
- It can be used for heli coil threading.
- It can be used for both right and left-handed threading.



521P

ISO 측정항목

단위 Unit: mm

Order Number	피치규격		날수	산수	날경	유효장	전장	샹크
	Thread	Pitch	Flutes Z	Teeth Zt	Diameter D	Effective Length L2	Overall Length L	Shank Dia d

외부급유형 (Without coolant)

4STM 0072 020 S04 M1	M1	0.25	4	3	0.72	2	45	4
4STM 0072 025 S04 M1	M1	0.25	4	3	0.72	2.5	45	4
4STM 009 024 S04 M012	M1.2	0.25	4	3	0.9	2.4	45	4
4STM 009 030 S04 M012	M1.2	0.25	4	3	0.9	3	45	4
4STM 0095 028 S06 M014	M1.4	0.3	4	3	0.95	2.8	50	6
4STM 0095 035 S06 M014	M1.4	0.3	4	3	0.95	3.5	50	6
4STM 011 032 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	3.2	50	6
4STM 011 040 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	4	50	6
4STM 012 050 S03 M016	M1.6 ~ 1.8	0.35	4	3	1.2	5	40	3
4STM 014 040 S06 M2	M2	0.4	4	3	1.4	4	50	6
4STM 014 050 S06 M2	M2	0.4	4	3	1.4	5	50	6
4STM 0155 062 S03 M2	M2	0.4	4	3	1.55	6.2	40	3
4STM 0155 062 S06 M2	M2	0.4	4	3	1.55	6.2	60	6
4STM 016 044 S06 M022	M2.2	0.45	4	3	1.6	4.4	50	6
4STM 016 055 S06 M022	M2.2	0.45	4	3	1.6	5.5	50	6
4STM 018 050 S06 M025	M2.5	0.45	4	3	1.8	5	50	6
4STM 018 0625 S06 M025	M2.5	0.45	4	3	1.8	6.25	50	6
4STM 0195 077 S03 M025	M2.5	0.45	4	3	1.95	7.7	40	3
4STM 0195 077 S06 M025	M2.5	0.45	4	3	1.95	7.7	60	6
4STM 024 060 S06 M3	M3	0.5	4	3	2.4	6	50	6
4STM 024 075 S06 M3	M3	0.5	4	3	2.4	7.5	50	6
4STM 024 092 S03 M3	M3	0.5	4	3	2.4	9.2	40	3
4STM 024 092 S06 M3	M3	0.5	4	3	2.4	9.2	60	6
4STM 0275 108 S06 M035	M3.5	0.6	4	3	2.75	10.8	60	6
4STM 031 080 S06 M4	M4	0.7	4	3	3.1	8	50	6
4STM 031 100 S06 M4	M4	0.7	4	3	3.1	10	50	6
4STM 0315 123 S06 M4	M4	0.7	4	3	3.15	12.3	60	6
4STM 038 100 S06 M5	M5	0.8	4	3	3.8	10	50	6
4STM 038 125 S06 M5	M5	0.8	4	3	3.8	12.5	50	6
4STM 0405 154 S06 M5	M5	0.8	4	3	4.05	15.4	60	6
4STM 046 120 S06 M6	M6	1	4	3	4.6	12	50	6
4STM 046 150 S06 M6	M6	1	4	3	4.6	15	50	6
4STM 048 185 S06 M6	M6	1	4	3	4.8	18.5	60	6
4STM 062 160 S10 M8	M8	1.25	4	3	6.2	16	70	10
4STM 062 200 S10 M8	M8	1.25	4	3	6.2	20	70	10
4STM 065 246 S08 M8	M8	1.25	4	3	6.5	24.6	65	8
4STM 075 200 S10 M10	M10	1.5	4	3	7.5	20	70	10
4STM 075 250 S10 M10	M10	1.5	4	3	7.5	25	70	10
4STM 082 308 S10 M10	M10	1.5	4	3	8.2	30.8	80	10
4STM 090 240 S10 M12	M12	1.75	4	3	9	24	80	10
4STM 090 300 S10 M12	M12	1.75	4	3	9	30	80	10
4STM 099 370 S10 M12	M12	1.75	4	3	9.9	37	85	10
4STM 115 320 S12 M16	M16	2	4	3	11.5	32	100	12
4STM 115 400 S12 M16	M16	2	4	3	11.5	40	100	12
4STM 119 490 S12 M16	M16	2	4	3	11.9	49	95	12

ISO 측정항목

단위 Unit: mm

Order Number	피치규격		날수	산수	날경	유효장	전장	생크
	Thread	Pitch	Flutes Z	Teeth Zt	Diameter D	Effective Length L2	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

4STM 140 360 S16 M18	M18	2.5	4	3	14	36	135	16
4STM 140 450 S16 M18	M18	2.5	4	3	14	45	135	16
4STM 150 400 S16 M20	M20	2.5	4	3	15	40	135	16
4STM 150 500 S16 M20	M20	2.5	4	3	15	50	135	16
4STM 159 613 S16 M20	M20	2.5	4	3	15.9	61.3	115	16

내부 급유형 (With coolant)

4STM 031 080 S06 M4C	M4	0.7	4	3	3.1	8	50	6
4STM 031 100 S06 M4C	M4	0.7	4	3	3.1	10	50	6
4STM 038 100 S06 M5C	M5	0.8	4	3	3.8	10	50	6
4STM 038 125 S06 M5C	M5	0.8	4	3	3.8	12.5	50	6
4STM 046 120 S06 M6C	M6	1	4	3	4.6	12	50	6
4STM 046 150 S06 M6C	M6	1	4	3	4.6	15	50	6
4STM 048 185 S06 M6C	M6	1	4	3	4.8	18.5	60	6
4STM 062 160 S10 M8C	M8	1.25	4	3	6.2	16	70	10
4STM 062 200 S10 M8C	M8	1.25	4	3	6.2	20	70	10
4STM 065 246 S08 M8C	M8	1.25	4	3	6.5	24.6	65	8
4STM 075 200 S10 M10C	M10	1.5	4	3	7.5	20	70	10
4STM 075 250 S10 M10C	M10	1.5	4	3	7.5	25	70	10
4STM 082 308 S10 M10C	M10	1.5	4	3	8.2	30.8	80	10
4STM 090 240 S10 M12C	M12	1.75	4	3	9	24	80	10
4STM 090 300 S10 M12C	M12	1.75	4	3	9	30	80	10
4STM 099 370 S10 M12C	M12	1.75	4	3	9.9	37	85	10
4STM 115 320 S12 M16C	M16	2	4	3	11.5	32	100	12
4STM 115 400 S12 M16C	M16	2	4	3	11.5	40	100	12
4STM 119 490 S12 M16C	M16	2	4	3	11.9	49	95	12
4STM 140 360 S16 M18C	M18	2.5	4	3	14	36	135	16
4STM 140 450 S16 M18C	M18	2.5	4	3	14	45	135	16
4STM 150 400 S16 M20C	M20	2.5	4	3	15	40	135	16
4STM 150 500 S16 M20C	M20	2.5	4	3	15	50	135	16
4STM 159 613 S16 M20C	M20	2.5	4	3	15.9	61.3	115	16



4 Flutes Short Flute Thread Mills for Multi Purpose

4날 범용 짧은 날 쓰레드밀

American UN

단위 Unit: mm

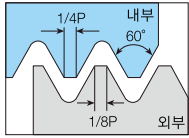
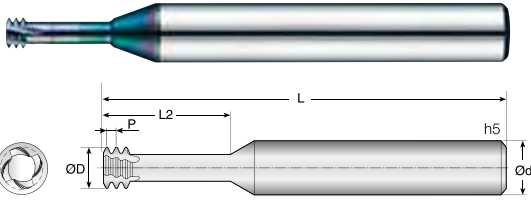
Order Number	피치규격 Thread			날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	UNC	UNF	Pitch						

외부급유형 (Without coolant)

4STM 014 037 S06	No. 1-64		64	4	3	1.4	3.7	50	6
4STM 014 046 S06	No. 1-64		64	4	3	1.4	4.6	50	6
4STM 0165 044 S06	No. 2-56		56	4	3	1.65	4.4	50	6
4STM 0165 055 S06	No. 2-56		56	4	3	1.65	5.5	50	6
4STM 019 050 S06	No. 3-48		48	4	3	1.9	5	50	6
4STM 019 063 S06	No. 3-48		48	4	3	1.9	6.3	50	6
4STM 021 057 S06	No. 4-40		40	4	3	2.1	5.7	50	6
4STM 021 071 S06	No. 4-40		40	4	3	2.1	7.1	50	6
4STM 0255 070 S06	No. 6-32		32	4	3	2.55	7	50	6
4STM 0255 088 S06	No. 6-32		32	4	3	2.55	8.8	50	6
4STM 033 083 S06		No. 8-36	36	4	3	3.3	8.3	50	6
4STM 033 104 S06		No. 8-36	36	4	3	3.3	10.4	50	6
4STM 035 097 S06	No. 10-24		24	4	3	3.5	9.7	65	6
4STM 035 121 S06	No. 10-24		24	4	3	3.5	12.1	65	6
4STM 0475 127 S06	1/4" x 20		20	4	3	4.75	12.7	65	6
4STM 0475 159 S06	1/4" x 20		20	4	3	4.75	15.9	65	6
4STM 050 127 S06		1/4" x 28	28	4	3	5	12.7	65	6
4STM 050 159 S06		1/4" x 28	28	4	3	5	15.9	65	6
4STM 060 159 S10	5/16" x 18		18	4	3	6	15.9	80	10
4STM 060 198 S10	5/16" x 18		18	4	3	6	19.8	80	10
4STM 067 191 S10	3/8" x 16		16	4	3	6.7	19.1	80	10
4STM 067 238 S10	3/8" x 16		16	4	3	6.7	23.8	80	10
4STM 077 222 S10	7/16" x 14		14	4	3	7.7	22.2	80	10
4STM 077 278 S10	7/16" x 14		14	4	3	7.7	27.8	80	10
4STM 092 254 S10	1/2" x 13		13	4	3	9.2	25.4	80	10
4STM 092 318 S10	1/2" x 13		13	4	3	9.2	31.8	80	10
4STM 105 286 S12	9/16" x 12		12	4	3	10.5	28.6	100	12
4STM 105 357 S12	9/16" x 12		12	4	3	10.5	35.7	100	12
4STM 114 318 S12	5/8" x 11		11	4	3	11.4	31.8	100	12
4STM 114 397 S12	5/8" x 11		11	4	3	11.4	39.7	100	12

내부급유형 (With coolant)

4STM 033 083 S06C		No. 8-36	36	4	3	3.3	8.3	50	6
4STM 033 104 S06C		No. 8-36	36	4	3	3.3	10.4	50	6
4STM 035 097 S06C	No. 10-24		24	4	3	3.5	9.7	65	6
4STM 035 121 S06C	No. 10-24		24	4	3	3.5	12.1	65	6
4STM 0475 127 S06C	1/4" x 20		20	4	3	4.75	12.7	65	6
4STM 0475 159 S06C	1/4" x 20		20	4	3	4.75	15.9	65	6
4STM 050 127 S06C		1/4" x 28	28	4	3	5	12.7	65	6
4STM 050 159 S06C		1/4" x 28	28	4	3	5	15.9	65	6
4STM 060 159 S10C	5/16" x 18		18	4	3	6	15.9	80	10
4STM 060 198 S10C	5/16" x 18		18	4	3	6	19.8	80	10
4STM 067 191 S10C	3/8" x 16		16	4	3	6.7	19.1	80	10
4STM 067 238 S10C	3/8" x 16		16	4	3	6.7	23.8	80	10
4STM 077 222 S10C	7/16" x 14		14	4	3	7.7	22.2	80	10
4STM 077 278 S10C	7/16" x 14		14	4	3	7.7	27.8	80	10
4STM 092 254 S10C	1/2" x 13		13	4	3	9.2	25.4	80	10
4STM 092 318 S10C	1/2" x 13		13	4	3	9.2	31.8	80	10
4STM 105 286 S12C	9/16" x 12		12	4	3	10.5	28.6	100	12
4STM 105 357 S12C	9/16" x 12		12	4	3	10.5	35.7	100	12
4STM 114 318 S12C	5/8" x 11		11	4	3	11.4	31.8	100	12
4STM 114 397 S12C	5/8" x 11		11	4	3	11.4	39.7	100	12



- 알루미늄, 알루미늄 합금 등 비철 비금속 가공
- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩제거를 통해 공구 성능을 향상 시킵니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.
- 헬리코일 나사 가공이 가능합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

Thread Mills for Aluminum, Aluminum alloys, non-ferrous and non-metallic materials

- Powerful flute design applied for hardened steel.
- Improved cutting and chip removal reduce the risk of tool breaking in holes.
- The tip shape reduces cutting resistance and tool bend.
- It can be used for heli coil threading.
- It can be used for both right and left-handed threading.



ISO 측정항목

521P

단위 Unit: mm

Order Number	피치 규격		날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	Thread	Pitch						

외부 급유형 (Without coolant)

4STMA 0072 020 S04 M1	M1	0.25	4	3	0.72	2	45	4
4STMA 0072 025 S04 M1	M1	0.25	4	3	0.72	2.5	45	4
4STMA 009 024 S04 M012	M1.2	0.25	4	3	0.9	2.4	45	4
4STMA 009 030 S04 M012	M1.2	0.25	4	3	0.9	3	45	4
4STMA 0095 028 S06 M014	M1.4	0.3	4	3	0.95	2.8	50	6
4STMA 0095 035 S06 M014	M1.4	0.3	4	3	0.95	3.5	50	6
4STMA 011 032 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	3.2	50	6
4STMA 011 040 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	4	50	6
4STMA 012 050 S03 M016	M1.6 ~ 1.8	0.35	4	3	1.2	5	40	3
4STMA 014 040 S06 M2	M2	0.4	4	3	1.4	4	50	6
4STMA 014 050 S06 M2	M2	0.4	4	3	1.4	5	50	6
4STMA 0155 062 S03 M2	M2	0.4	4	3	1.55	6.2	40	3
4STMA 0155 062 S06 M2	M2	0.4	4	3	1.55	6.2	60	6
4STMA 016 044 S06 M022	M2.2	0.45	4	3	1.6	4.4	50	6
4STMA 016 055 S06 M022	M2.2	0.45	4	3	1.6	5.5	50	6
4STMA 018 050 S06 M025	M2.5	0.45	4	3	1.8	5	50	6
4STMA 018 0625 S06 M025	M2.5	0.45	4	3	1.8	6.25	50	6
4STMA 0195 077 S03 M025	M2.5	0.45	4	3	1.95	7.7	40	3
4STMA 0195 077 S06 M025	M2.5	0.45	4	3	1.95	7.7	60	6
4STMA 024 060 S06 M3	M3	0.5	4	3	2.4	6	50	6
4STMA 024 075 S06 M3	M3	0.5	4	3	2.4	7.5	50	6
4STMA 024 092 S03 M3	M3	0.5	4	3	2.4	9.2	40	3
4STMA 024 092 S06 M3	M3	0.5	4	3	2.4	9.2	60	6
4STMA 0275 108 S06 M035	M3.5	0.6	4	3	2.75	10.8	60	6
4STMA 031 080 S06 M4	M4	0.7	4	3	3.1	8	50	6
4STMA 031 100 S06 M4	M4	0.7	4	3	3.1	10	50	6
4STMA 0315 123 S06 M4	M4	0.7	4	3	3.15	12.3	60	6
4STMA 038 100 S06 M5	M5	0.8	4	3	3.8	10	50	6
4STMA 038 125 S06 M5	M5	0.8	4	3	3.8	12.5	50	6
4STMA 0405 154 S06 M5	M5	0.8	4	3	4.05	15.4	60	6
4STMA 046 120 S06 M6	M6	1	4	3	4.6	12	50	6
4STMA 046 150 S06 M6	M6	1	4	3	4.6	15	50	6
4STMA 048 185 S06 M6	M6	1	4	3	4.8	18.5	60	6
4STMA 062 160 S10 M8	M8	1.25	4	3	6.2	16	70	10
4STMA 062 200 S10 M8	M8	1.25	4	3	6.2	20	70	10
4STMA 065 246 S08 M8	M8	1.25	4	3	6.5	24.6	65	8
4STMA 075 200 S10 M10	M10	1.5	4	3	7.5	20	70	10
4STMA 075 250 S10 M10	M10	1.5	4	3	7.5	25	70	10
4STMA 082 308 S10 M10	M10	1.5	4	3	8.2	30.8	80	10
4STMA 090 240 S10 M12	M12	1.75	4	3	9	24	80	10
4STMA 090 300 S10 M12	M12	1.75	4	3	9	30	80	10
4STMA 099 370 S10 M12	M12	1.75	4	3	9.9	37	85	10
4STMA 115 320 S12 M16	M16	2	4	3	11.5	32	100	12
4STMA 115 400 S12 M16	M16	2	4	3	11.5	40	100	12
4STMA 119 490 S12 M16	M16	2	4	3	11.9	49	95	12

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수	산수	날경	유효장	전장	생크
	Thread	Pitch	Flutes Z	Teeth Zt	Diameter D	Effective Length L2	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

4STMA 140 360 S16 M18	M18	2.5	4	3	14	36	135	16
4STMA 140 450 S16 M18	M18	2.5	4	3	14	45	135	16
4STMA 150 400 S16 M20	M20	2.5	4	3	15	40	135	16
4STMA 150 500 S16 M20	M20	2.5	4	3	15	50	135	16
4STMA 159 613 S16 M20	M20	2.5	4	3	15.9	61.3	115	16

내부 급유형 (With coolant)

4STMA 031 080 S06 M4C	M4	0.7	4	3	3.1	8	50	6
4STMA 031 100 S06 M4C	M4	0.7	4	3	3.1	10	50	6
4STMA 038 100 S06 M5C	M5	0.8	4	3	3.8	10	50	6
4STMA 038 125 S06 M5C	M5	0.8	4	3	3.8	12.5	50	6
4STMA 046 120 S06 M6C	M6	1	4	3	4.6	12	50	6
4STMA 046 150 S06 M6C	M6	1	4	3	4.6	15	50	6
4STMA 048 185 S06 M6C	M6	1	4	3	4.8	18.5	60	6
4STMA 062 160 S10 M8C	M8	1.25	4	3	6.2	16	70	10
4STMA 062 200 S10 M8C	M8	1.25	4	3	6.2	20	70	10
4STMA 065 246 S08 M8C	M8	1.25	4	3	6.5	24.6	65	8
4STMA 075 200 S10 M10C	M10	1.5	4	3	7.5	20	70	10
4STMA 075 250 S10 M10C	M10	1.5	4	3	7.5	25	70	10
4STMA 082 308 S10 M10C	M10	1.5	4	3	8.2	30.8	80	10
4STMA 090 240 S10 M12C	M12	1.75	4	3	9	24	80	10
4STMA 090 300 S10 M12C	M12	1.75	4	3	9	30	80	10
4STMA 099 370 S10 M12C	M12	1.75	4	3	9.9	37	85	10
4STMA 115 320 S12 M16C	M16	2	4	3	11.5	32	100	12
4STMA 115 400 S12 M16C	M16	2	4	3	11.5	40	100	12
4STMA 119 490 S12 M16C	M16	2	4	3	11.9	49	95	12
4STMA 140 360 S16 M18C	M18	2.5	4	3	14	36	135	16
4STMA 140 450 S16 M18C	M18	2.5	4	3	14	45	135	16
4STMA 150 400 S16 M20C	M20	2.5	4	3	15	40	135	16
4STMA 150 500 S16 M20C	M20	2.5	4	3	15	50	135	16
4STMA 159 613 S16 M20C	M20	2.5	4	3	15.9	61.3	115	16

American UN

단위 Unit: mm

Order Number	피치규격 Thread			날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	UNC	UNF	Pitch						

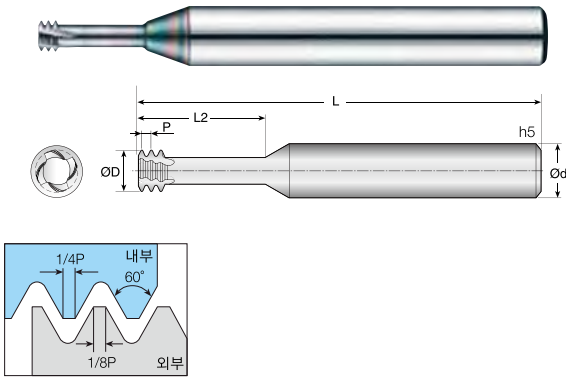
외부급유형 (Without coolant)

4STMA 014 037 S06	No. 1-64		64	4	3	1.4	3.7	50	6
4STMA 014 046 S06	No. 1-64		64	4	3	1.4	4.6	50	6
4STMA 0165 044 S06	No. 2-56		56	4	3	1.65	4.4	50	6
4STMA 0165 055 S06	No. 2-56		56	4	3	1.65	5.5	50	6
4STMA 019 050 S06	No. 3-48		48	4	3	1.9	5	50	6
4STMA 019 063 S06	No. 3-48		48	4	3	1.9	6.3	50	6
4STMA 021 057 S06	No. 4-40		40	4	3	2.1	5.7	50	6
4STMA 021 071 S06	No. 4-40		40	4	3	2.1	7.1	50	6
4STMA 0255 070 S06	No. 6-32		32	4	3	2.55	7	50	6
4STMA 0255 088 S06	No. 6-32		32	4	3	2.55	8.8	50	6
4STMA 033 083 S06		No. 8-36	36	4	3	3.3	8.3	50	6
4STMA 033 104 S06		No. 8-36	36	4	3	3.3	10.4	50	6
4STMA 035 097 S06	No. 10-24		24	4	3	3.5	9.7	65	6
4STMA 035 121 S06	No. 10-24		24	4	3	3.5	12.1	65	6
4STMA 0475 127 S06	1/4" x 20		20	4	3	4.75	12.7	65	6
4STMA 0475 159 S06	1/4" x 20		20	4	3	4.75	15.9	65	6
4STMA 050 127 S06		1/4" x 28	28	4	3	5	12.7	65	6
4STMA 050 159 S06		1/4" x 28	28	4	3	5	15.9	65	6
4STMA 060 159 S10	5/16" x 18		18	4	3	6	15.9	80	10
4STMA 060 198 S10	5/16" x 18		18	4	3	6	19.8	80	10
4STMA 067 191 S10	3/8" x 16		16	4	3	6.7	19.1	80	10
4STMA 067 238 S10	3/8" x 16		16	4	3	6.7	23.8	80	10
4STMA 077 222 S10	7/16" x 14		14	4	3	7.7	22.2	80	10
4STMA 077 278 S10	7/16" x 14		14	4	3	7.7	27.8	80	10
4STMA 092 254 S10	1/2" x 13		13	4	3	9.2	25.4	80	10
4STMA 092 318 S10	1/2" x 13		13	4	3	9.2	31.8	80	10
4STMA 105 286 S12	9/16" x 12		12	4	3	10.5	28.6	100	12
4STMA 105 357 S12	9/16" x 12		12	4	3	10.5	35.7	100	12
4STMA 114 318 S12	5/8" x 11		11	4	3	11.4	31.8	100	12
4STMA 14 397 S12	5/8" x 11		11	4	3	11.4	39.7	100	12

내부급유형 (With coolant)

4STMA 033 083 S06C		No. 8-36	36	4	3	3.3	8.3	50	6
4STMA 033 104 S06C		No. 8-36	36	4	3	3.3	10.4	50	6
4STMA 035 097 S06C	No. 10-24		24	4	3	3.5	9.7	65	6
4STMA 035 121 S06C	No. 10-24		24	4	3	3.5	12.1	65	6
4STMA 0475 127 S06C	1/4" x 20		20	4	3	4.75	12.7	65	6
4STMA 0475 159 S06C	1/4" x 20		20	4	3	4.75	15.9	65	6
4STMA 050 127 S06C		1/4" x 28	28	4	3	5	12.7	65	6
4STMA 050 159 S06C		1/4" x 28	28	4	3	5	15.9	65	6
4STMA 060 159 S10C	5/16" x 18		18	4	3	6	15.9	80	10
4STMA 060 198 S10C	5/16" x 18		18	4	3	6	19.8	80	10
4STMA 067 191 S10C	3/8" x 16		16	4	3	6.7	19.1	80	10
4STMA 067 238 S10C	3/8" x 16		16	4	3	6.7	23.8	80	10
4STMA 077 222 S10C	7/16" x 14		14	4	3	7.7	22.2	80	10
4STMA 077 278 S10C	7/16" x 14		14	4	3	7.7	27.8	80	10
4STMA 092 254 S10C	1/2" x 13		13	4	3	9.2	25.4	80	10
4STMA 092 318 S10C	1/2" x 13		13	4	3	9.2	31.8	80	10
4STMA 105 286 S12C	9/16" x 12		12	4	3	10.5	28.6	100	12
4STMA 105 357 S12C	9/16" x 12		12	4	3	10.5	35.7	100	12
4STMA 114 318 S12C	5/8" x 11		11	4	3	11.4	31.8	100	12
4STMA 114 397 S12C	5/8" x 11		11	4	3	11.4	39.7	100	12

THREAD MILL



ISO 측정항목

521P

단위 Unit: mm

Order Number	피치 규격		날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d
	Thread	Pitch						

외부 급유형 (Without coolant)

4STMS 0072 020 S04 M1	M1	0.25	4	3	0.72	2	45	4
4STMS 0072 025 S04 M1	M1	0.25	4	3	0.72	2.5	45	4
4STMS 009 024 S04 M012	M1.2	0.25	4	3	0.9	2.4	45	4
4STMS 009 030 S04 M012	M1.2	0.25	4	3	0.9	3	45	4
4STMS 0095 028 S06 M014	M1.4	0.3	4	3	0.95	2.8	50	6
4STMS 0095 035 S06 M014	M1.4	0.3	4	3	0.95	3.5	50	6
4STMS 011 032 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	3.2	50	6
4STMS 011 040 S06 M016	M1.6 ~ 1.8	0.35	4	3	1.1	4	50	6
4STMS 012 050 S03 M016	M1.6 ~ 1.8	0.35	4	3	1.2	5	40	3
4STMS 014 040 S06 M2	M2	0.4	4	3	1.4	4	50	6
4STMS 14 050 S06 M2	M2	0.4	4	3	1.4	5	50	6
4STMS 0155 062 S03 M2	M2	0.4	4	3	1.55	6.2	40	3
4STMS 0155 062 S06 M2	M2	0.4	4	3	1.55	6.2	60	6
4STMS 016 044 S06 M022	M2.2	0.45	4	3	1.6	4.4	50	6
4STMS 016 055 S06 M022	M2.2	0.45	4	3	1.6	5.5	50	6
4STMS 018 050 S06 M025	M2.5	0.45	4	3	1.8	5	50	6
4STMS 018 0625 S06 M025	M2.5	0.45	4	3	1.8	6.25	50	6
4STMS 0195 077 S03 M025	M2.5	0.45	4	3	1.95	7.7	40	3
4STMS 0195 077 S06 M025	M2.5	0.45	4	3	1.95	7.7	60	6
4STMS 024 060 S06 M3	M3	0.5	4	3	2.4	6	50	6
4STMS 024 075 S06 M3	M3	0.5	4	3	2.4	7.5	50	6
4STMS 024 092 S03 M3	M3	0.5	4	3	2.4	9.2	40	3
4STMS 024 092 S06 M3	M3	0.5	4	3	2.4	9.2	60	6
4STMS 0275 108 S06 M3.5	M3.5	0.6	4	3	2.75	10.8	60	6
4STMS 031 080 S06 M4	M4	0.7	4	3	3.1	8	50	6
4STMS 031 100 S06 M4	M4	0.7	4	3	3.1	10	50	6
4STMS 0315 123 S06 M4	M4	0.7	4	3	3.15	12.3	60	6
4STMS 038 100 S06 M5	M5	0.8	4	3	3.8	10	50	6
4STMS 038 125 S06 M5	M5	0.8	4	3	3.8	12.5	50	6
4STMS 0405 154 S06 M5	M5	0.8	4	3	4.05	15.4	60	6
4STMS 046 120 S06 M6	M6	1	4	3	4.6	12	50	6
4STMS 046 150 S06 M6	M6	1	4	3	4.6	15	50	6
4STMS 048 185 S06 M6	M6	1	4	3	4.8	18.5	60	6
4STMS 062 160 S10 M8	M8	1.25	4	3	6.2	16	70	10
4STMS 062 200 S10 M8	M8	1.25	4	3	6.2	20	70	10
4STMS 065 246 S08 M8	M8	1.25	4	3	6.5	24.6	65	8
4STMS 075 200 S10 M10	M10	1.5	4	3	7.5	20	70	10
4STMS 075 250 S10 M10	M10	1.5	4	3	7.5	25	70	10
4STMS 082 308 S10 M10	M10	1.5	4	3	8.2	30.8	80	10
4STMS 090 240 S10 M12	M12	1.75	4	3	9	24	80	10
4STMS 090 300 S10 M12	M12	1.75	4	3	9	30	80	10
4STMS 099 370 S10 M12	M12	1.75	4	3	9.9	37	85	10
4STMS 115 320 S12 M16	M16	2	4	3	11.5	32	100	12
4STMS 115 400 S12 M16	M16	2	4	3	11.5	40	100	12
4STMS 119 490 S12 M16	M16	2	4	3	11.9	49	95	12

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	Thread	Pitch						

외부 급유형 (Without coolant)

4STMS 140 360 S16 M18	M18	2.5	4	3	14	36	135	16
4STMS 140 450 S16 M18	M18	2.5	4	3	14	45	135	16
4STMS 150 400 S16 M20	M20	2.5	4	3	15	40	135	16
4STMS 150 500 S16 M20	M20	2.5	4	3	15	50	135	16
4STMS 159 613 S16 M20	M20	2.5	4	3	15.9	61.3	115	16

내부 급유형 (With coolant)

4STMS 031 080 S06 M4C	M4	0.7	4	3	3.1	8	50	6
4STMS 031 100 S06 M4C	M4	0.7	4	3	3.1	10	50	6
4STMS 038 100 S06 M5C	M5	0.8	4	3	3.8	10	50	6
4STMS 038 125 S06 M5C	M5	0.8	4	3	3.8	12.5	50	6
4STMS 046 120 S06 M6C	M6	1	4	3	4.6	12	50	6
4STMS 046 150 S06 M6C	M6	1	4	3	4.6	15	50	6
4STMS 048 185 S06 M6C	M6	1	4	3	4.8	18.5	60	6
4STMS 062 160 S10 M8C	M8	1.25	4	3	6.2	16	70	10
4STMS 062 200 S10 M8C	M8	1.25	4	3	6.2	20	70	10
4STMS 065 246 S08 M8C	M8	1.25	4	3	6.5	24.6	65	8
4STMS 075 200 S10 M10C	M10	1.5	4	3	7.5	20	70	10
4STMS 075 250 S10 M10C	M10	1.5	4	3	7.5	25	70	10
4STMS 082 308 S10 M10C	M10	1.5	4	3	8.2	30.8	80	10
4STMS 090 240 S10 M12C	M12	1.75	4	3	9	24	80	10
4STMS 090 300 S10 M12C	M12	1.75	4	3	9	30	80	10
4STMS 099 370 S10 M12C	M12	1.75	4	3	9.9	37	85	10
4STMS 115 320 S12 M16C	M16	2	4	3	11.5	32	100	12
4STMS 115 400 S12 M16C	M16	2	4	3	11.5	40	100	12
4STMS 119 490 S12 M16C	M16	2	4	3	11.9	49	95	12
4STMS 140 360 S16 M18C	M18	2.5	4	3	14	36	135	16
4STMS 140 450 S16 M18C	M18	2.5	4	3	14	45	135	16
4STMS 150 400 S16 M20C	M20	2.5	4	3	15	40	135	16
4STMS 150 500 S16 M20C	M20	2.5	4	3	15	50	135	16
4STMS 159 613 S16 M20C	M20	2.5	4	3	15.9	61.3	115	16

American UN

단위 Unit: mm

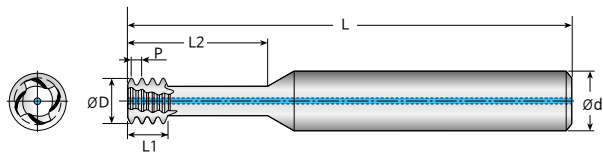
Order Number	피치규격 Thread			날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	UNC	UNF	Pitch						

외부급유형 (Without coolant)

4STMS 014 037 S06	No. 1-64		64	4	3	1.4	3.7	50	6
4STMS 014 046 S06	No. 1-64		64	4	3	1.4	4.6	50	6
4STMS 0165 044 S06	No. 2-56		56	4	3	1.65	4.4	50	6
4STMS 0165 055 S06	No. 2-56		56	4	3	1.65	5.5	50	6
4STMS 019 050 S06	No. 3-48		48	4	3	1.9	5	50	6
4STMS 019 063 S06	No. 3-48		48	4	3	1.9	6.3	50	6
4STMS 021 057 S06	No. 4-40		40	4	3	2.1	5.7	50	6
4STMS 021 071 S06	No. 4-40		40	4	3	2.1	7.1	50	6
4STMS 0255 070 S06	No. 6-32		32	4	3	2.55	7	50	6
4STMS 0255 088 S06	No. 6-32		32	4	3	2.55	8.8	50	6
4STMS 033 083 S06		No. 8-36	36	4	3	3.3	8.3	50	6
4STMS 033 104 S06		No. 8-36	36	4	3	3.3	10.4	50	6
4STMS 035 097 S06	No. 10-24		24	4	3	3.5	9.7	65	6
4STMS 035 121 S06	No. 10-24		24	4	3	3.5	12.1	65	6
4STMS 0475 127 S06	1/4" x 20		20	4	3	4.75	12.7	65	6
4STMS 0475 159 S06	1/4" x 20		20	4	3	4.75	15.9	65	6
4STMS 050 127 S06		1/4" x 28	28	4	3	5	12.7	65	6
4STMS 050 159 S06		1/4" x 28	28	4	3	5	15.9	65	6
4STMS 060 159 S10	5/16" x 18		18	4	3	6	15.9	80	10
4STMS 060 198 S10	5/16" x 18		18	4	3	6	19.8	80	10
4STMS 067 191 S10	3/8" x 16		16	4	3	6.7	19.1	80	10
4STMS 067 238 S10	3/8" x 16		16	4	3	6.7	23.8	80	10
4STMS 077 222 S10	7/16" x 14		14	4	3	7.7	22.2	80	10
4STMS 077 278 S10	7/16" x 14		14	4	3	7.7	27.8	80	10
4STMS 092 254 S10	1/2" x 13		13	4	3	9.2	25.4	80	10
4STMS 092 318 S10	1/2" x 13		13	4	3	9.2	31.8	80	10
4STMS 105 286 S12	9/16" x 12		12	4	3	10.5	28.6	100	12
4STMS 105 357 S12	9/16" x 12		12	4	3	10.5	35.7	100	12
4STMS 114 318 S12	5/8" x 11		11	4	3	11.4	31.8	100	12
4STMS 14 397 S12	5/8" x 11		11	4	3	11.4	39.7	100	12

내부급유형 (With coolant)

4STMS 033 083 S06C		No. 8-36	36	4	3	3.3	8.3	50	6
4STMS 033 104 S06C		No. 8-36	36	4	3	3.3	10.4	50	6
4STMS 035 097 S06C	No. 10-24		24	4	3	3.5	9.7	65	6
4STMS 035 121 S06C	No. 10-24		24	4	3	3.5	12.1	65	6
4STMS 0475 127 S06C	1/4" x 20		20	4	3	4.75	12.7	65	6
4STMS 0475 159 S06C	1/4" x 20		20	4	3	4.75	15.9	65	6
4STMS 050 127 S06C		1/4" x 28	28	4	3	5	12.7	65	6
4STMS 050 159 S06C		1/4" x 28	28	4	3	5	15.9	65	6
4STMS 060 159 S10C	5/16" x 18		18	4	3	6	15.9	80	10
4STMS 060 198 S10C	5/16" x 18		18	4	3	6	19.8	80	10
4STMS 067 191 S10C	3/8" x 16		16	4	3	6.7	19.1	80	10
4STMS 067 238 S10C	3/8" x 16		16	4	3	6.7	23.8	80	10
4STMS 077 222 S10C	7/16" x 14		14	4	3	7.7	22.2	80	10
4STMS 077 278 S10C	7/16" x 14		14	4	3	7.7	27.8	80	10
4STMS 092 254 S10C	1/2" x 13		13	4	3	9.2	25.4	80	10
4STMS 092 318 S10C	1/2" x 13		13	4	3	9.2	31.8	80	10
4STMS 105 286 S12C	9/16" x 12		12	4	3	10.5	28.6	100	12
4STMS 105 357 S12C	9/16" x 12		12	4	3	10.5	35.7	100	12
4STMS 114 318 S12C	5/8" x 11		11	4	3	11.4	31.8	100	12
4STMS 114 397 S12C	5/8" x 11		11	4	3	11.4	39.7	100	12



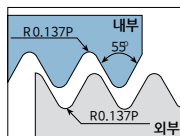
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American UN

- HRc 58이하의 고경도강, 프리하든강, 합금강, 탄소강, 주철 가공
- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩 제거를 통해 공구 성능을 향상 시킵니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

- Thread mills for Hardened steels (up to HRc 58), pre-hardened steels, alloy steels, carbon steels, cast irons

- Rigid and powerful flutes design for inside hardening steel.
- Enhanced threading enables chip removal smoothly to reduce possible breakage of tool inside hole.
- The shape of tip reduces friction and prevent tool bending.
- Both right and left threading are available.

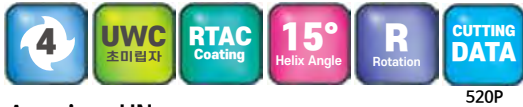
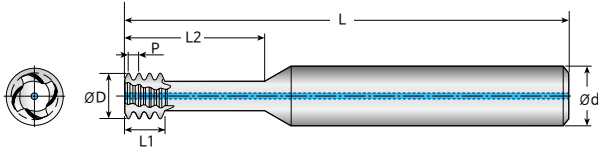


- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
외부 급유형 (Without coolant)									
4BSP 060 095 S06	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSP 060 158 S06	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSP 080 140 S08	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSP 100 206 S10	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSP 120 265 S12	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSP 140 260 S14	3/8"	19	4	4	14	5.38	26	85	14
4BSP 140 334 S16	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSP 160 380 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSP 160 517 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16

내부 급유형 (With coolant)									
4BSP 060 095 S06C	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSP 060 158 S06C	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSP 080 140 S08C	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSP 100 206 S10C	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSP 120 265 S12C	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSP 140 260 S14C	3/8"	19	4	4	14	5.38	26	85	14
4BSP 140 334 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSP 160 380 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSP 160 517 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16



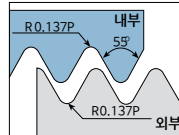
American UN

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- 알루미늄, 알루미늄 합금 등 비철 비금속 가공
- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩제거를 통해 공구 성능을 향상 시킵니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

Thread mills for Aluminum, Aluminum alloys, non-ferrous, and non-metallic materials

- Rigid and powerful flutes design for inside hardening steel.
- Enhanced threading enables chip removal smoothly to reduce possible breakage of tool inside hole.
- The shape of tip reduces fraction and prevent tool bending.
- Both right and left threading are available.

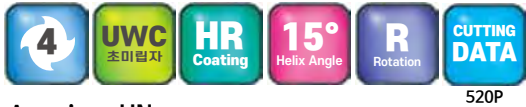
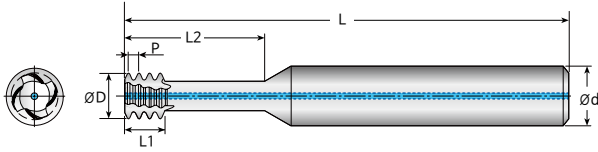


- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샅크 Shank Dia d
외부 급유형 (Without coolant)									
4BSPA 060 095 S06	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSPA 060 158 S06	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSPA 080 140 S08	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSPA 100 206 S10	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSPA 120 265 S12	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSPA 140 260 S14	3/8"	19	4	4	14	5.38	26	85	14
4BSPA 140 334 S16	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSPA 160 380 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSPA 160 517 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16

내부 급유형 (With coolant)									
4BSPA 060 095 S06C	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSPA 060 158 S06C	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSPA 080 140 S08C	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSPA 100 206 S10C	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSPA 120 265 S12C	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSPA 140 260 S14C	3/8"	19	4	4	14	5.38	26	85	14
4BSPA 140 334 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSPA 160 380 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSPA 160 517 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16



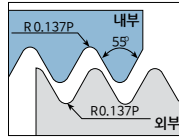
American UN

520P

- SUS, 티타늄 합금 가공
- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩 제거를 통해 공구 성능을 향상 시킵니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

Thread mills for SUS and Titanium alloys

- Rigid and powerful flutes design for inside hardening steel.
- Enhanced threading enables chip removal smoothly to reduce possible breakage of tool inside hole.
- The shape of tip reduces fraction and prevent tool bending.
- Both right and left threading are available.

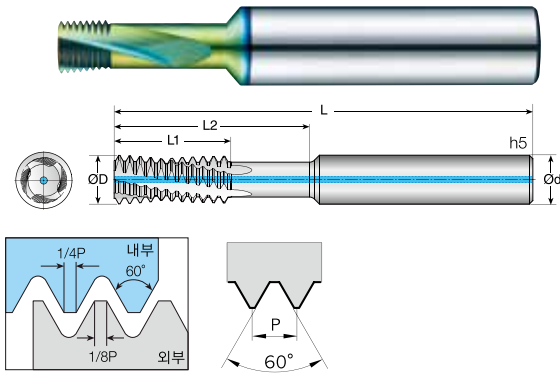


- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d
외부 급유형 (Without coolant)									
4BSPS 060 095 S06	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSPS 060 158 S06	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSPS 080 140 S08	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSPS 100 206 S10	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSPS 120 265 S12	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSPS 140 260 S14	3/8"	19	4	4	14	5.38	26	85	14
4BSPS 140 334 S16	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSPS 160 380 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSPS 160 517 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16

내부 급유형 (With coolant)									
4BSPS 060 095 S06C	1/16", 1/8"	28	4	4	6	3.66	9.5	60	6
4BSPS 060 158 S06C	1/16", 1/8"	28	4	4	6	3.66	15.8	60	6
4BSPS 080 140 S08C	1/4", 3/8"	19	4	4	8	5.38	14	65	8
4BSPS 100 206 S10C	1/4", 3/8"	19	4	4	10	5.38	20.6	75	10
4BSPS 120 265 S12C	1/2", 5/8", 3/4"	14	4	4	12	7.29	26.5	80	12
4BSPS 140 260 S14C	3/8"	19	4	4	14	5.38	26	85	14
4BSPS 140 334 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	16	7.29	33.4	95	16
4BSPS 160 380 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	16	9.27	38	105	16
4BSPS 160 517 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	4	16	9.27	51.7	120	16



- HRc 48이하의 고경도강, 프리하든강, 합금강, 탄소강, 주철 가공
- 깊은 나사 가공을 위한 쿨런트 타입 헬릭컬 날
- 다중 날 로 구성되어 한번에 여러 나사산 생성으로 시간단축이 가능합니다.
- 최대 나사 가공깊이 : 3xD2 (나사가공 직경)
- 헬리코일 나사 가공이 가능합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.
- Thread mills for Hardened steel (up to HRc 48), pre-hardened steels, alloy steels, carbon steels, cast irons
- Coolant type of helix flutes for deep threading.
- With multiple flutes composition, it shortens threading time.
- Maximum drilling depth: 3*D2 (Threading diameter)
- It can be used for heli coil threading.
- Both right and left threading are available.



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ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		기초홀 직경 Guide Hole mm	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	Thread	Pitch						
4HTM 024 090 S04 M3	M3	0.5	2.5	2.4	4.7	9	45	4
4HTM 0315 120 S04 M4	M4	0.7	3.3	3.15	6.6	12	45	4
4HTM 039 150 S04 M5	M5	0.8	4.2	3.9	7.6	15	50	4
4HTM 048 180 S06 M6	M6	1	5	4.8	9.5	18	60	6
4HTM 065 240 S08 M8	M8	1.25	6.8	6.5	13.1	24	65	8
4HTM 082 300 S10 M10	M10	1.5	8.5	8.2	15.7	30	75	10
4HTM 099 360 S10 M12	M12	1.75	10.2	9.9	18.4	36	85	10
4HTM 116 420 S12 M14	M14	2	12	11.6	21	42	90	12
4HTM 136 480 S14 M16	M16	2	14	13.6	25	48	100	14

외부 급유형 (Without coolant)

4HTM 024 090 S04 M3C	M3	0.5	2.5	2.4	4.7	9	45	4
4HTM 0315 120 S04 M4C	M4	0.7	3.3	3.15	6.6	12	45	4
4HTM 039 150 S04 M5C	M5	0.8	4.2	3.9	7.6	15	50	4
4HTM 048 180 S06 M6C	M6	1	5	4.8	9.5	18	60	6
4HTM 065 240 S08 M8C	M8	1.25	6.8	6.5	13.1	24	65	8
4HTM 082 300 S10 M10C	M10	1.5	8.5	8.2	15.7	30	75	10
4HTM 099 360 S10 M12C	M12	1.75	10.2	9.9	18.4	36	85	10
4HTM 116 420 S12 M14C	M14	2	12	11.6	21	42	90	12
4HTM 136 480 S14 M16C	M16	2	14	13.6	25	48	100	14

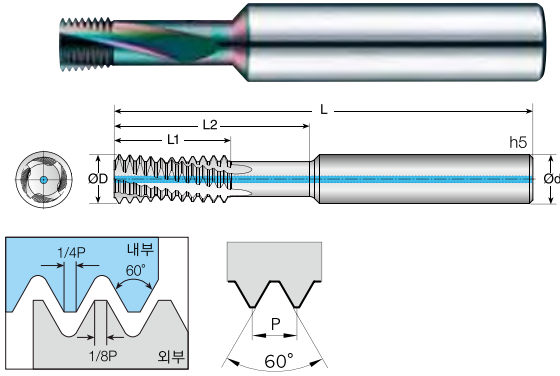
내부 급유형 (With coolant)

American UN

단위 Unit: mm

Order Number	피치 규격 Thread			날경 Diameter D	나사부 길이 Thread Length L1	나사 산수 Number of threads	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	UNC	UNF	Pitch						
외부 급유형 (Without coolant)									
4HTM 0358 1585 S04	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTM 0414 1798 S06	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTM 0488 1905 S06	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTM 0516 1905 S06		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTM 0615 2398 S08	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTM 0765 3018 S08	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTM 0899 3444 S10	7/16" x 14		14	8.99	18.16	10	34.44	75	10
4HTM 1034 4105 S12	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTM 1181 4445 S12	9/16" x 12		12	11.81	23.29	11	44.45	80	12

내부 급유형 (With coolant)									
4HTM 0358 1585 S04C	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTM 0414 1798 S06C	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTM 0488 1905 S06C	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTM 0516 1905 S06C		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTM 0615 2398 S08C	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTM 0765 3018 S08C	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTM 0899 3444 S10C	7/16" x 14		14	8.99	18.16	10	34.44	75	10
4HTM 1034 4105 S12C	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTM 1181 4445 S12C	9/16" x 12		12	11.81	23.29	11	44.45	80	12



- 알루미늄, 알루미늄 합금 등 비철 비금속 가공
- 깊은 나사 가공을 위한 쿨런트 타입 헬릭스 날
- 다중 날 로 구성되어 한번에 여러 나사산 생성으로 시간단축이 가능합니다.
- 최대 나사 가공깊이 : 3xD2 (나사가공 직경)
- 헬리코일 나사 가공이 가능합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.
- Thread Mills for Aluminum, Aluminum alloys, non-ferrous and non-metallic materials
- Coolant type of helix flutes for deep threading.
- With multiple flutes composition, it shortens threading time.
- Maximum drilling depth: 3*D2 (Threading diameter)
- It can be used for heli coil threading.
- Both right and left threading are available.



ISO 측정항목

521P

단위 Unit: mm

Order Number	피치 규격		기초홀 직경 Guide Hole mm	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	Thread	Pitch						
4HTMA 024 090 S04 M3	M3	0.5	2.5	2.4	4.7	9	45	4
4HTMA 0315 120 S04 M4	M4	0.7	3.3	3.15	6.6	12	45	4
4HTMA 039 150 S04 M5	M5	0.8	4.2	3.9	7.6	15	50	4
4HTMA 048 180 S06 M6	M6	1	5	4.8	9.5	18	60	6
4HTMA 065 240 S08 M8	M8	1.25	6.8	6.5	13.1	24	65	8
4HTMA 082 300 S10 M10	M10	1.5	8.5	8.2	15.7	30	75	10
4HTMA 099 360 S10 M12	M12	1.75	10.2	9.9	18.4	36	85	10
4HTMA 116 420 S12 M14	M14	2	12	11.6	21	42	90	12
4HTMA 136 480 S14 M16	M16	2	14	13.6	25	48	100	14

외부 급유형 (Without coolant)

내부 급유형 (With coolant)

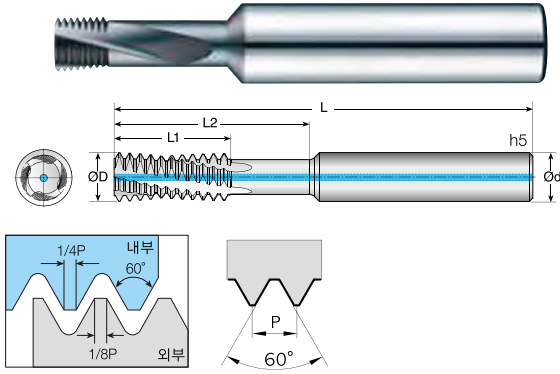
4HTMA 024 090 S04 M3C	M3	0.5	2.5	2.4	4.7	9	45	4
4HTMA 0315 120 S04 M4C	M4	0.7	3.3	3.15	6.6	12	45	4
4HTMA 039 150 S04 M5C	M5	0.8	4.2	3.9	7.6	15	50	4
4HTMA 048 180 S06 M6C	M6	1	5	4.8	9.5	18	60	6
4HTMA 065 240 S08 M8C	M8	1.25	6.8	6.5	13.1	24	65	8
4HTMA 082 300 S10 M10C	M10	1.5	8.5	8.2	15.7	30	75	10
4HTMA 099 360 S10 M12C	M12	1.75	10.2	9.9	18.4	36	85	10
4HTMA 116 420 S12 M14C	M14	2	12	11.6	21	42	90	12
4HTMA 136 480 S14 M16C	M16	2	14	13.6	25	48	100	14

American UN

단위 Unit: mm

Order Number	피치 규격			날경 Diameter D	나사부 길이 Thread Length L1	나사 산수 Number of threads	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	UNC	UNF	Pitch						
외부 급유형 (Without coolant)									
4HTMA 0358 1585 S04	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTMA 0414 1798 S06	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTMA 0488 1905 S06	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTMA 0516 1905 S06		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTMA 0615 2398 S08	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTMA 0765 3018 S08	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTMA 0899 3444 S10	7/16 x 14		14	8.99	18.16	10	34.44	75	10
4HTMA 1034 4105 S12	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTMA 1181 4445 S12	9/16" x 12		12	11.81	23.29	11	44.45	80	12

내부 급유형 (With coolant)									
4HTMA 0358 1585 S04C	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTMA 0414 1798 S06C	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTMA 0488 1905 S06C	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTMA 0516 1905 S06C		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTMA 0615 2398 S08C	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTMA 0765 3018 S08C	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTMA 0899 3444 S10C	7/16" x 14		14	8.99	18.16	10	34.44	75	10
4HTMA 1034 4105 S12C	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTMA 1181 4445 S12C	9/16" x 12		12	11.81	23.29	11	44.45	80	12



- SUS, 티타늄 합금 가공
- 깊은 나사 가공을 위한 쿨런트 타입 헬릭컬 날
- 다중 날 로 구성되어 한번에 여러 나사산 생성으로 시간단축이 가능합니다.
- 최대 나사 가공깊이 : 3xD2 (나사가공 직경)
- 헬리코일 나사 가공이 가능합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

- Thread Mills for SUS, Titanium alloys
- Coolant type of helix flutes for deep threading.
- With multiple flutes composition, it shortens threading time.
- Maximum drilling depth: 3*D2 (Threading diameter)
- It can be used for heli coil threading.
- Both right and left threading are available.



521P

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		기초홀 직경 Guide Hole mm	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
	Thread	Pitch						
외부 급유형 (Without coolant)								
4HTMS 024 090 S04 M3	M3	0.5	2.5	2.4	4.7	9	45	4
4HTMS 0315 120 S04 M4	M4	0.7	3.3	3.15	6.6	12	45	4
4HTMS 039 150 S04 M5	M5	0.8	4.2	3.9	7.6	15	50	4
4HTMS 048 180 S06 M6	M6	1	5	4.8	9.5	18	60	6
4HTMS 065 240 S08 M8	M8	1.25	6.8	6.5	13.1	24	65	8
4HTMS 082 300 S10 M10	M10	1.5	8.5	8.2	15.7	30	75	10
4HTMS 099 360 S10 M12	M12	1.75	10.2	9.9	18.4	36	85	10
4HTMS 116 420 S12 M14	M14	2	12	11.6	21	42	90	12
4HTMS 136 480 S14 M16	M16	2	14	13.6	25	48	100	14

내부 급유형 (With coolant)								
4HTMS 024 090 S04 M3C	M3	0.5	2.5	2.4	4.7	9	45	4
4HTMS 0315 120 S04 M4C	M4	0.7	3.3	3.15	6.6	12	45	4
4HTMS 039 150 S04 M5C	M5	0.8	4.2	3.9	7.6	15	50	4
4HTMS 048 180 S06 M6C	M6	1	5	4.8	9.5	18	60	6
4HTMS 065 240 S08 M8C	M8	1.25	6.8	6.5	13.1	24	65	8
4HTMS 082 300 S10 M10C	M10	1.5	8.5	8.2	15.7	30	75	10
4HTMS 099 360 S10 M12C	M12	1.75	10.2	9.9	18.4	36	85	10
4HTMS 116 420 S12 M14C	M14	2	12	11.6	21	42	90	12
4HTMS 136 480 S14 M16C	M16	2	14	13.6	25	48	100	14

American UN

단위 Unit: mm

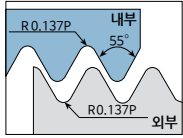
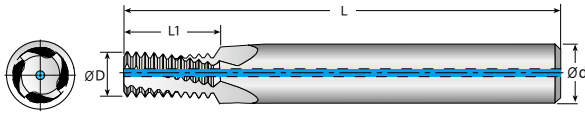
Order Number	피치 규격			날경 Diameter D	나사부 길이 Thread Length L1	나사 산수 Number of threads	유효장 Effective Length L2	전장 Overall Length L	생크 Shank Dia d
	UNC	UNF	Pitch						

외부 급유형 (Without coolant)

4HTMS 0358 1585 S04	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTMS 0414 1798 S06	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTMS 0488 1905 S06	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTMS 0516 1905 S06		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTMS 0615 2398 S08	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTMS 0765 3018 S08	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTMS 0899 3444 S10	7/16" x 14		14	8.99	18.16	10	34.44	75	10
4HTMS 1034 4105 S12	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTMS 1181 4445 S12	9/16" x 12		12	11.81	23.29	11	44.45	80	12

내부 급유형 (With coolant)

4HTMS 0358 1585 S04C	No.10-24		24	3.58	8.46	8	15.85	45	4
4HTMS 0414 1798 S06C	No.12-24		24	4.14	9.6	9	17.98	65	6
4HTMS 0488 1905 S06C	1/4" x 20		20	4.88	10.21	8	19.05	65	6
4HTMS 0516 1905 S06C		1/4" x 28	28	5.16	10.01	11	19.05	65	6
4HTMS 0615 2398 S08C	5/16" x 18		18	6.15	12.7	9	23.98	65	8
4HTMS 0765 3018 S08C	3/8" x 16		16	7.65	15.9	10	30.18	65	8
4HTMS 0899 3444 S10C	7/16" x 14		14	8.99	18.16	10	34.44	75	10
4HTMS 1034 4105 S12C	1/2" x 13		13	10.34	19.58	10	41.05	80	12
4HTMS 1181 4445 S12C	9/16" x 12		12	11.81	23.29	11	44.45	80	12



- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class



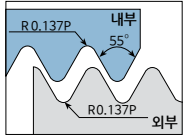
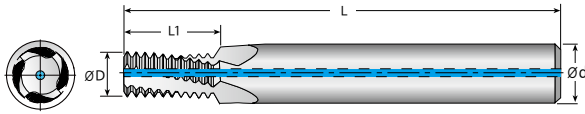
520P

American UN

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샹크 Shank Dia d
외부 급유형 (Without coolant)								
4HBSP 060 0942 S06	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSP 060 1577 S06	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSP 080 1387 S08	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSP 100 2055 S10	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSP 120 1882 S12	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSP 140 259 S14	3/8"	19	4	19	14	25.9	85	14
4HBSP 160 378 S16	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSP 160 3333 S16	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSP 160 5165 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16

내부 급유형 (With coolant)								
4HBSP 060 0942 S06C	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSP 060 1577 S06C	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSP 080 1387 S08C	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSP 100 2055 S10C	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSP 120 1882 S12C	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSP 140 259 S14C	3/8"	19	4	19	14	25.9	85	14
4HBSP 160 378 S16C	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSP 160 3333 S16C	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSP 160 5165 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16



- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class



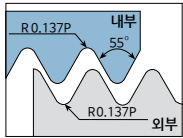
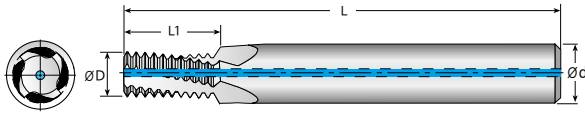
520P

American UN

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샙크 Shank Dia d
외부 급유형 (Without coolant)								
4HBSPA 060 0942 S06	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSPA 060 1577 S06	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSPA 080 1387 S08	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSPA 100 2055 S10	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSPA 120 1882 S12	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSPA 140 259 S14	3/8"	19	4	19	14	25.9	85	14
4HBSPA 160 378 S16	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSPA 160 3333 S16	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSPA 160 5165 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16

내부 급유형 (With coolant)								
4HBSPA 060 0942 S06C	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSPA 060 1577 S06C	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSPA 080 1387 S08C	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSPA 100 2055 S10C	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSPA 120 1882 S12C	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSPA 140 259 S14C	3/8"	19	4	19	14	25.9	85	14
4HBSPA 160 378 S16C	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSPA 160 3333 S16C	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSPA 160 5165 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16



- 규격 정의 : B.S.2779:1956
- 공차 등급 : Medium class



520P

American UN

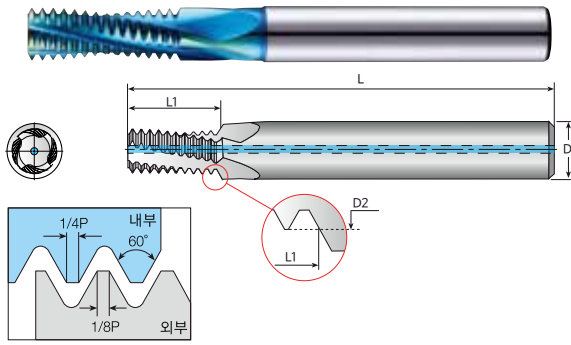
단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	생크 Shank Dia d
4HBSPS 060 0942 S06	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSPS 060 1577 S06	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSPS 080 1387 S08	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSPS 100 2055 S10	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSPS 120 1882 S12	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSPS 140 259 S14	3/8"	19	4	19	14	25.9	85	14
4HBSPS 160 378 S16	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSPS 160 3333 S16	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSPS 160 5165 S16	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16

외부 급유형 (Without coolant)

내부 급유형 (With coolant)

4HBSPS 060 0942 S06C	1/16", 1/8"	28	4	10	6	9.42	60	6
New 4HBSPS 060 1577 S06C	1/16", 1/8"	28	4	17	6	15.77	60	6
4HBSPS 080 1387 S08C	1/4", 3/8"	19	4	10	8	13.87	65	8
New 4HBSPS 100 2055 S10C	1/4", 3/8"	19	4	15	10	20.55	75	10
4HBSPS 120 1882 S12C	1/2", 5/8", 3/4"	14	4	10	12	18.82	80	12
New 4HBSPS 140 259 S14C	3/8"	19	4	19	14	25.9	85	14
4HBSPS 160 378 S16C	1", 1 1/4", 1 1/2", 2"	11	4	16	16	37.8	105	16
New 4HBSPS 160 3333 S16C	1/2", 5/8", 3/4", 7/8"	14	4	18	16	33.33	95	16
New 4HBSPS 160 5165 S16C	1", 1 1/4", 1 1/2", 2", 2 1/2"	11	4	22	16	51.65	120	16



• 규격 범위 : R262 (DN 13)
• 공차 등급 : 6H



521P

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수	날경	나사부 길이	전장	생크
	Thread	Pitch	Flutes Z	Diameter D	Thread Length L1	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

4LTM 022 060 S06 M3	M3	0.5	4	2.2	6	60	6
4LTM 022 075 S06 M3	M3	0.5	4	2.2	7.5	60	6
4LTM 029 084 S06 M4	M4	0.7	4	2.9	8.4	60	6
4LTM 029 105 S06 M4	M4	0.7	4	2.9	10.5	60	6
4LTM 038 104 S06 M5	M5	0.8	4	3.8	10.4	60	6
4LTM 038 128 S06 M5	M5	0.8	4	3.8	12.8	60	6
4LTM 045 120 S06 M6	M6	1	4	4.5	12	60	6
4LTM 045 150 S06 M6	M6	1	4	4.5	15	60	6
4LTM 060 1625 S06 M8	M8	1.25	4	6	16.25	65	6
4LTM 060 200 S06 M8	M8	1.25	4	6	20	65	6
4LTM 075 210 S08 M10	M10	1.5	4	7.5	21	75	8
4LTM 075 255 S08 M10	M10	1.5	4	7.5	25.5	80	8
4LTM 095 245 S10 M12	M12	1.75	4	9.5	24.5	85	10
4LTM 095 315 S10 M12	M12	1.75	4	9.5	31.5	85	10
4LTM 100 280 S10 M14	M14	2	4	10	28	90	10
4LTM 100 360 S10 M14	M14	2	4	10	36	95	10
4LTM 120 320 S12 M16	M16	2	4	12	32	100	12
4LTM 120 400 S12 M16	M16	2	4	12	40	105	12
4LTM 140 375 S14 M18	M18	2.5	4	14	37.5	100	14
4LTM 140 450 S14 M18	M18	2.5	4	14	45	110	14
4LTM 160 400 S16 M20	M20	2.5	4	16	40	110	16
4LTM 160 500 S16 M20	M20	2.5	4	16	50	120	16

내부 급유형 (With coolant)

4LTM 045 120 S06 M6C	M6	1	4	4.5	12	60	6
4LTM 045 150 S06 M6C	M6	1	4	4.5	15	60	6
4LTM 060 1625 S06 M8C	M8	1.25	4	6	16.25	65	6
4LTM 060 200 S06 M8C	M8	1.25	4	6	20	65	6
4LTM 075 210 S08 M10C	M10	1.5	4	7.5	21	75	8
4LTM 075 255 S08 M10C	M10	1.5	4	7.5	25.5	80	8
4LTM 095 245 S10 M12C	M12	1.75	4	9.5	24.5	85	10
4LTM 095 315 S10 M12C	M12	1.75	4	9.5	31.5	85	10
4LTM 100 280 S10 M14C	M14	2	4	10	28	90	10
4LTM 100 360 S10 M14C	M14	2	4	10	36	95	10
4LTM 120 320 S12 M16C	M16	2	4	12	32	100	12
4LTM 120 400 S12 M16C	M16	2	4	12	40	105	12
4LTM 140 375 S14 M18C	M18	2.5	4	14	37.5	100	14
4LTM 140 450 S14 M18C	M18	2.5	4	14	45	110	14
4LTM 160 400 S16 M20C	M20	2.5	4	16	40	110	16
4LTM 160 500 S16 M20C	M20	2.5	4	16	50	120	16



American UN

단위 Unit: mm

Order Number	피치규격 Thread				날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샹크 Shank Dia d
	UNC	UNF	UNEF	Pitch (TPI)						

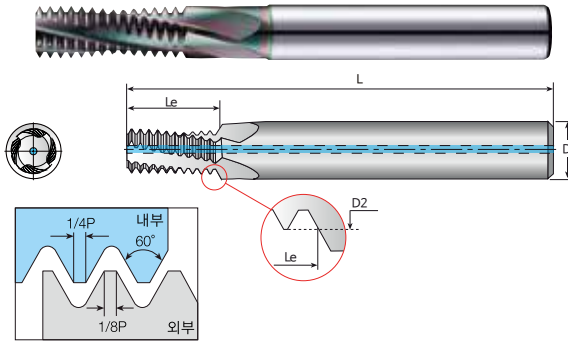
외부급유형 (Without coolant)

4LTM 021 060 S04	No.4, No.5	No.6		40	4	9	2.1	6	45	4
4LTM 021 079 S04	No.4, No.5	No.6		40	4	12	2.1	7.9	45	4
4LTM 0255 075 S04	No.6, No.8	No.10	No.12	32	4	9	2.55	7.5	45	4
4LTM 0255 099 S04	No.6, No.8	No.10	No.12	32	4	12	2.55	9.9	45	4
4LTM 033 088 S04		No.8		36	4	12	3.3	8.8	45	4
4LTM 033 109 S04		No.8		36	4	15	3.3	10.9	45	4
4LTM 0358 099 S04	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4
4LTM 0358 131 S04	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4
4LTM 038 099 S04		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4
4LTM 038 130 S04		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4
4LTM 0415 110 S06	No.12	5/16 ~, 3/8 ~		24	4	10	4.15	11	60	6
4LTM 0415 152 S06	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6
4LTM 043 112 S06		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6
4LTM 043 149 S06		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6
4LTM 044 114 S06			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6
4LTM 044 154 S06			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6
4LTM 0488 132 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6
4LTM 0488 170 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6
4LTM 0515 131 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6
4LTM 0515 167 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6
4LTM 0615 160 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8
4LTM 0615 217 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8
4LTM 0668 163 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8
4LTM 0668 205 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8
4LTM 0765 196 S08	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8
4LTM 0765 244 S08	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8
4LTM 082 195 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10
4LTM 082 247 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10
4LTM 090 224 S10	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10
4LTM 090 297 S10	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10
4LTM 096 221 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10
4LTM 096 284 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10
4LTM 099 221 S10			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10
4LTM 099 285 S10			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10
4LTM 1035 261 S12	1/2 ~			13	4	13	10.35	26.1	80	12
4LTM 1035 339 S12	1/2 ~			13	4	17	10.35	33.9	90	12
4LTM 111 259 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12
4LTM 111 322 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12
4LTM 118 283 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12
4LTM 118 367 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12
4LTM 125 287 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14
4LTM 125 372 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14
4LTM 129 290 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14
4LTM 129 364 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14
4LTM 131 331 S14	5/8 ~			11	4	14	13.1	33.1	95	14
4LTM 131 424 S14	5/8 ~			11	4	18	13.1	42.4	105	14
4LTM 141 316 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16
4LTM 141 414 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16
4LTM 159 390 S16	3/4 ~			10	4	15	15.9	39	100	16
4LTM 159 491 S16	3/4 ~			10	4	19	15.9	49.1	110	16
4LTM 160 387 S16		3/4 ~		16	4	24	16	38.7	105	16
4LTM 160 482 S16		3/4 ~		16	4	30	16	48.2	115	16
4LTM 160 386 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16
4LTM 160 487 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16
4LTM 160 461 S16	7/8 ~			9	4	16	16	46.1	110	16
4LTM 160 442 S16		7/8 ~		14	4	24	16	44.2	110	16
4LTM 160 519 S16	1 ~			8	4	16	16	51.9	120	16
4LTM 160 515 S16		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16

American UN

단위 Unit: mm

Order Number	피치규격 Thread				Pitch (TPI)	날수	산수	날경	나사부 길이	전장	생크
	UNC	UNF	UNEF	Flutes Z		Teeth Zt	Diameter D	Thread Length L1	Overall Length L	Shank Dia d	
내부 금유형 (With coolant)											
4LTM 0358 099 S04C	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4	
4LTM 0358 131 S04C	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4	
4LTM 038 099 S04C		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4	
4LTM 038 130 S04C		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4	
4LTM 0415 110 S06C	No.12	5/16 ~, 3/8 ~		24	4	10	4.15	11	60	6	
4LTM 0415 152 S06C	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6	
4LTM 043 112 S06C		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6	
4LTM 043 149 S06C		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6	
4LTM 044 114 S06C			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6	
4LTM 044 154 S06C			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6	
4LTM 0488 132 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6	
4LTM 0488 170 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6	
4LTM 0515 131 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6	
4LTM 0515 167 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6	
4LTM 0615 160 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8	
4LTM 0615 217 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8	
4LTM 0668 163 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8	
4LTM 0668 205 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8	
4LTM 0765 196 S08C	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8	
4LTM 0765 244 S08C	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8	
4LTM 082 195 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10	
4LTM 082 247 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10	
4LTM 090 224 S10C	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10	
4LTM 090 297 S10C	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10	
4LTM 096 221 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10	
4LTM 096 284 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10	
4LTM 099 221 S10C			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10	
4LTM 099 285 S10C			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10	
4LTM 1035 261 S12C	1/2 ~			13	4	13	10.35	26.1	80	12	
4LTM 1035 339 S12C	1/2 ~			13	4	17	10.35	33.9	90	12	
4LTM 111 259 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12	
4LTM 111 322 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12	
4LTM 118 283 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12	
4LTM 118 367 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12	
4LTM 125 287 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14	
4LTM 125 372 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14	
4LTM 129 290 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14	
4LTM 129 364 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14	
4LTM 131 331 S14C	5/8 ~			11	4	14	13.1	33.1	95	14	
4LTM 131 424 S14C	5/8 ~			11	4	18	13.1	42.4	105	14	
4LTM 141 316 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16	
4LTM 141 414 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16	
4LTM 159 390 S16C	3/4 ~			10	4	15	15.9	39	100	16	
4LTM 159 491 S16C	3/4 ~			10	4	19	15.9	49.1	110	16	
4LTM 160 387 S16C		3/4 ~		16	4	24	16	38.7	105	16	
4LTM 160 482 S16C		3/4 ~		16	4	30	16	48.2	115	16	
4LTM 160 386 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16	
4LTM 160 487 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16	
4LTM 160 461 S16C	7/8 ~			9	4	16	16	46.1	110	16	
4LTM 160 442 S16C		7/8 ~		14	4	24	16	44.2	110	16	
4LTM 160 519 S16C	1 ~			8	4	16	16	51.9	120	16	
4LTM 160 515 S16C		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16	



• 규격 정의 : R262 (DN 13)
• 공차 등급 : 6H



ISO 측정항목

521P

단위 Unit: mm

Order Number	피치 규격		날수 Flutes Z	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샹크 Shank Dia d
	Thread	Pitch					
외부 급유형 (Without coolant)							
4LTMA 022 060 S06 M3	M3	0.5	4	2.2	6	60	6
4LTMA 022 075 S06 M3	M3	0.5	4	2.2	7.5	60	6
4LTMA 029 084 S06 M4	M4	0.7	4	2.9	8.4	60	6
4LTMA 029 105 S06 M4	M4	0.7	4	2.9	10.5	60	6
4LTMA 038 104 S06 M5	M5	0.8	4	3.8	10.4	60	6
4LTMA 038 128 S06 M5	M5	0.8	4	3.8	12.8	60	6
4LTMA 045 120 S06 M6	M6	1	4	4.5	12	60	6
4LTMA 045 150 S06 M6	M6	1	4	4.5	15	60	6
4LTMA 060 1625 S06 M8	M8	1.25	4	6	16.25	65	6
4LTMA 060 200 S06 M8	M8	1.25	4	6	20	65	6
4LTMA 075 210 S08 M10	M10	1.5	4	7.5	21	75	8
4LTMA 075 255 S08 M10	M10	1.5	4	7.5	25.5	80	8
4LTMA 095 245 S10 M12	M12	1.75	4	9.5	24.5	85	10
4LTMA 095 315 S10 M12	M12	1.75	4	9.5	31.5	85	10
4LTMA 100 280 S10 M14	M14	2	4	10	28	90	10
4LTMA 100 360 S10 M14	M14	2	4	10	36	95	10
4LTMA 120 320 S12 M16	M16	2	4	12	32	100	12
4LTMA 120 400 S12 M16	M16	2	4	12	40	105	12
4LTMA 140 375 S14 M18	M18	2.5	4	14	37.5	100	14
4LTMA 140 450 S14 M18	M18	2.5	4	14	45	110	14
4LTMA 160 400 S16 M20	M20	2.5	4	16	40	110	16
4LTMA 160 500 S16 M20	M20	2.5	4	16	50	120	16

내부 급유형 (With coolant)

4LTMA 045 120 S06 M6C	M6	1	4	4.5	12	60	6
4LTMA 045 150 S06 M6C	M6	1	4	4.5	15	60	6
4LTMA 060 1625 S06 M8C	M8	1.25	4	6	16.25	65	6
4LTMA 060 200 S06 M8C	M8	1.25	4	6	20	65	6
4LTMA 075 210 S08 M10C	M10	1.5	4	7.5	21	75	8
4LTMA 075 255 S08 M10C	M10	1.5	4	7.5	25.5	80	8
4LTMA 095 245 S10 M12C	M12	1.75	4	9.5	24.5	85	10
4LTMA 095 315 S10 M12C	M12	1.75	4	9.5	31.5	85	10
4LTMA 100 280 S10 M14C	M14	2	4	10	28	90	10
4LTMA 100 360 S10 M14C	M14	2	4	10	36	95	10
4LTMA 120 320 S12 M16C	M16	2	4	12	32	100	12
4LTMA 120 400 S12 M16C	M16	2	4	12	40	105	12
4LTMA 140 375 S14 M18C	M18	2.5	4	14	37.5	100	14
4LTMA 140 450 S14 M18C	M18	2.5	4	14	45	110	14
4LTMA 160 400 S16 M20C	M20	2.5	4	16	40	110	16
4LTMA 160 500 S16 M20C	M20	2.5	4	16	50	120	16

American UN

단위 Unit: mm

Order Number	피치규격 Thread				날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샹크 Shank Dia d
	UNC	UNF	UNEF	Pitch (TPI)						
외부 급유형(Without coolant)										
4LTMA 021 060 S04	No.4, No.5	No.6		40	4	9	2.1	6	45	4
4LTMA 021 079 S04	No.4, No.5	No.6		40	4	12	2.1	7.9	45	4
4LTMA 0255 075 S04	No.6, No.8	No.10	No.12	32	4	9	2.55	7.5	45	4
4LTMA 0255 099 S04	No.6, No.8	No.10	No.12	32	4	12	2.55	9.9	45	4
4LTMA 033 088 S04		No.8		36	4	12	3.3	8.8	45	4
4LTMA 033 109 S04		No.8		36	4	15	3.3	10.9	45	4
4LTMA 0358 099 S04	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4
4LTMA 0358 131 S04	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4
4LTMA 038 099 S04		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4
4LTMA 038 130 S04		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4
4LTMA 0415 110 S06	No.12	5/16 ~, 3/8 ~		24	4	10	4.15	11	60	6
4LTMA 0415 152 S06	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6
4LTMA 043 112 S06		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6
4LTMA 043 149 S06		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6
4LTMA 044 114 S06			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6
4LTMA 044 154 S06			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6
4LTMA 0488 132 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6
4LTMA 0488 170 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6
4LTMA 0515 131 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6
4LTMA 0515 167 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6
4LTMA 0615 160 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8
4LTMA 0615 217 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8
4LTMA 0668 163 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8
4LTMA 0668 205 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8
4LTMA 0765 196 S08	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8
4LTMA 0765 244 S08	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8
4LTMA 082 195 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10
4LTMA 082 247 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10
4LTMA 090 224 S10	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10
4LTMA 090 297 S10	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10
4LTMA 096 221 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10
4LTMA 096 284 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10
4LTMA 099 221 S10			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10
4LTMA 099 285 S10			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10
4LTMA 1035 261 S12	1/2 ~			13	4	13	10.35	26.1	80	12
4LTMA 1035 339 S12	1/2 ~			13	4	17	10.35	33.9	90	12
4LTMA 111 259 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12
4LTMA 111 322 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12
4LTMA 118 283 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12
4LTMA 118 367 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12
4LTMA 125 287 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14
4LTMA 125 372 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14
4LTMA 129 290 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14
4LTMA 129 364 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14
4LTMA 131 331 S14	5/8 ~			11	4	14	13.1	33.1	95	14
4LTMA 131 424 S14	5/8 ~			11	4	18	13.1	42.4	105	14
4LTMA 141 316 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16
4LTMA 141 414 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16
4LTMA 159 390 S16	3/4 ~			10	4	15	15.9	39	100	16
4LTMA 159 491 S16	3/4 ~			10	4	19	15.9	49.1	110	16
4LTMA 160 387 S16		3/4 ~		16	4	24	16	38.7	105	16
4LTMA 160 482 S16		3/4 ~		16	4	30	16	48.2	115	16
4LTMA 160 386 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16
4LTMA 160 487 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16
4LTMA 160 461 S16	7/8 ~			9	4	16	16	46.1	110	16
4LTMA 160 442 S16		7/8 ~		14	4	24	16	44.2	110	16
4LTMA 160 519 S16	1 ~			8	4	16	16	51.9	120	16
4LTMA 160 515 S16		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16

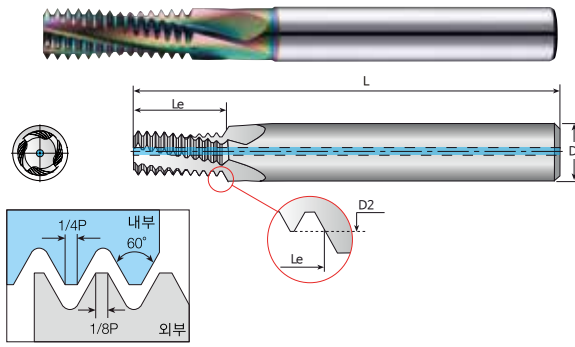
American UN

단위 Unit: mm

Order Number	파치규격 Thread				날수	산수	날경	나사부 길이	전장	생크
	UNC	UNF	UNEF	Pitch (TPI)	Flutes Z	Teeth Zt	Diameter D	Thread Length L1	Overall Length L	Shank Dia d

내부 급유형 (With coolant)

4LTMA 0358 099 S04C	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4
4LTMA 0358 131 S04C	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4
4LTMA 038 099 S04C		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4
4LTMA 038 130 S04C		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4
4LTMA 0415 110 S06C		No.12	5/16 ~, 3/8 ~	24	4	10	4.15	11	60	6
4LTMA 0415 152 S06C	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6
4LTMA 043 112 S06C		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6
4LTMA 043 149 S06C		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6
4LTMA 044 114 S06C			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6
4LTMA 044 154 S06C			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6
4LTMA 0488 132 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6
4LTMA 0488 170 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6
4LTMA 0515 131 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6
4LTMA 0515 167 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6
4LTMA 0615 160 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8
4LTMA 0615 217 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8
4LTMA 0668 163 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8
4LTMA 0668 205 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8
4LTMA 0765 196 S08C	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8
4LTMA 0765 244 S08C	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8
4LTMA 082 195 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10
4LTMA 082 247 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10
4LTMA 090 224 S10C	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10
4LTMA 090 297 S10C	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10
4LTMA 096 221 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10
4LTMA 096 284 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10
4LTMA 099 221 S10C			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10
4LTMA 099 285 S10C			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10
4LTMA 1035 261 S12C	1/2 ~			13	4	13	10.35	26.1	80	12
4LTMA 1035 339 S12C	1/2 ~			13	4	17	10.35	33.9	90	12
4LTMA 111 259 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12
4LTMA 111 322 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12
4LTMA 118 283 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12
4LTMA 118 367 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12
4LTMA 125 287 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14
4LTMA 125 372 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14
4LTMA 129 290 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14
4LTMA 129 364 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14
4LTMA 131 331 S14C	5/8 ~			11	4	14	13.1	33.1	95	14
4LTMA 131 424 S14C	5/8 ~			11	4	18	13.1	42.4	105	14
4LTMA 141 316 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16
4LTMA 141 414 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16
4LTMA 159 390 S16C	3/4 ~			10	4	15	15.9	39	100	16
4LTMA 159 491 S16C	3/4 ~			10	4	19	15.9	49.1	110	16
4LTMA 160 387 S16C		3/4 ~		16	4	24	16	38.7	105	16
4LTMA 160 482 S16C		3/4 ~		16	4	30	16	48.2	115	16
4LTMA 160 386 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16
4LTMA 160 487 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16
4LTMA 160 461 S16C	7/8 ~			9	4	16	16	46.1	110	16
4LTMA 160 442 S16C		7/8 ~		14	4	24	16	44.2	110	16
4LTMA 160 519 S16C	1 ~			8	4	16	16	51.9	120	16
4LTMA 160 515 S16C		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16



• 규격 정의 : R262 (DN 13)
• 공차 등급 : 6H



521P

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수	날경	나사부 길이	전장	생크
	Thread	Pitch	Flutes Z	Diameter D	Thread Length L1	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

4LTMS 022 060 S06 M3	M3	0.5	4	2.2	6	60	6
4LTMS 022 075 S06 M3	M3	0.5	4	2.2	7.5	60	6
4LTMS 029 084 S06 M4	M4	0.7	4	2.9	8.4	60	6
4LTMS 029 105 S06 M4	M4	0.7	4	2.9	10.5	60	6
4LTMS 038 104 S06 M5	M5	0.8	4	3.8	10.4	60	6
4LTMS 038 128 S06 M5	M5	0.8	4	3.8	12.8	60	6
4LTMS 045 120 S06 M6	M6	1	4	4.5	12	60	6
4LTMS 045 150 S06 M6	M6	1	4	4.5	15	60	6
4LTMS 060 1625 S06 M8	M8	1.25	4	6	16.25	65	6
4LTMS 060 200 S06 M8	M8	1.25	4	6	20	65	6
4LTMS 075 210 S08 M10	M10	1.5	4	7.5	21	75	8
4LTMS 075 255 S08 M10	M10	1.5	4	7.5	25.5	80	8
4LTMS 095 245 S10 M12	M12	1.75	4	9.5	24.5	85	10
4LTMS 095 315 S10 M12	M12	1.75	4	9.5	31.5	85	10
4LTMS 100 280 S10 M14	M14	2	4	10	28	90	10
4LTMS 100 360 S10 M14	M14	2	4	10	36	95	10
4LTMS 120 320 S12 M16	M16	2	4	12	32	100	12
4LTMS 120 400 S12 M16	M16	2	4	12	40	105	12
4LTMS 140 375 S14 M18	M18	2.5	4	14	37.5	100	14
4LTMS 140 450 S14 M18	M18	2.5	4	14	45	110	14
4LTMS 160 400 S16 M20	M20	2.5	4	16	40	110	16
4LTMS 160 500 S16 M20	M20	2.5	4	16	50	120	16

내부 급유형 (With coolant)

4LTMS 045 120 S06 M6C	M6	1	4	4.5	12	60	6
4LTMS 045 150 S06 M6C	M6	1	4	4.5	15	60	6
4LTMS 060 1625 S06 M8C	M8	1.25	4	6	16.25	65	6
4LTMS 060 200 S06 M8C	M8	1.25	4	6	20	65	6
4LTMS 075 210 S08 M10C	M10	1.5	4	7.5	21	75	8
4LTMS 075 255 S08 M10C	M10	1.5	4	7.5	25.5	80	8
4LTMS 095 245 S10 M12C	M12	1.75	4	9.5	24.5	85	10
4LTMS 095 315 S10 M12C	M12	1.75	4	9.5	31.5	85	10
4LTMS 100 280 S10 M14C	M14	2	4	10	28	90	10
4LTMS 100 360 S10 M14C	M14	2	4	10	36	95	10
4LTMS 120 320 S12 M16C	M16	2	4	12	32	100	12
4LTMS 120 400 S12 M16C	M16	2	4	12	40	105	12
4LTMS 140 375 S14 M18C	M18	2.5	4	14	37.5	100	14
4LTMS 140 450 S14 M18C	M18	2.5	4	14	45	110	14
4LTMS 160 400 S16 M20C	M20	2.5	4	16	40	110	16
4LTMS 160 500 S16 M20C	M20	2.5	4	16	50	120	16

American UN

단위 Unit: mm

Order Number	피치규격 Thread				날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샙크 Shank Dia d
	UNC	UNF	UNEF	Pitch (TPI)						

외부 급유형 (Without coolant)

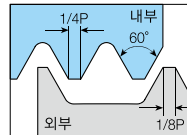
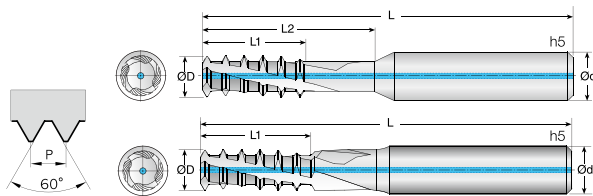
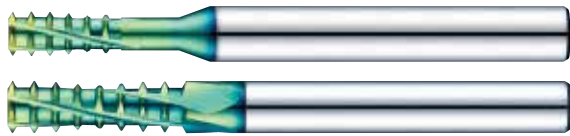
4LTMS 021 060 S04	No.4, No.5	No.6		40	4	9	2.1	6	45	4
4LTMS 021 079 S04	No.4, No.5	No.6		40	4	12	2.1	7.9	45	4
4LTMS 0255 075 S04	No.6, No.8	No.10	No.12	32	4	9	2.55	7.5	45	4
4LTMS 0255 099 S04	No.6, No.8	No.10	No.12	32	4	12	2.55	9.9	45	4
4LTMS 033 088 S04		No.8		36	4	12	3.3	8.8	45	4
4LTMS 033 109 S04		No.8		36	4	15	3.3	10.9	45	4
4LTMS 0358 099 S04	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4
4LTMS 0358 131 S04	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4
4LTMS 038 099 S04		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4
4LTMS 038 130 S04		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4
4LTMS 0415 110 S06	No.12	5/16 ~, 3/8 ~		24	4	10	4.15	11	60	6
4LTMS 0415 152 S06	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6
4LTMS 043 112 S06		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6
4LTMS 043 149 S06		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6
4LTMS 044 114 S06			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6
4LTMS 044 154 S06			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6
4LTMS 0488 132 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6
4LTMS 0488 170 S06	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6
4LTMS 0515 131 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6
4LTMS 0515 167 S06		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6
4LTMS 0615 160 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8
4LTMS 0615 217 S08	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8
4LTMS 0668 163 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8
4LTMS 0668 205 S08		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8
4LTMS 0765 196 S08	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8
4LTMS 0765 244 S08	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8
4LTMS 082 195 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10
4LTMS 082 247 S10		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10
4LTMS 090 224 S10	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10
4LTMS 090 297 S10	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10
4LTMS 096 221 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10
4LTMS 096 284 S10		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10
4LTMS 099 221 S10			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10
4LTMS 099 285 S10			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10
4LTMS 1035 261 S12	1/2 ~			13	4	13	10.35	26.1	80	12
4LTMS 1035 339 S12	1/2 ~			13	4	17	10.35	33.9	90	12
4LTMS 111 259 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12
4LTMS 111 322 S12		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12
4LTMS 118 283 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12
4LTMS 118 367 S12	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12
4LTMS 125 287 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14
4LTMS 125 372 S14		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14
4LTMS 129 290 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14
4LTMS 129 364 S14			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14
4LTMS 131 331 S14	5/8 ~			11	4	14	13.1	33.1	95	14
4LTMS 131 424 S14	5/8 ~			11	4	18	13.1	42.4	105	14
4LTMS 141 316 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16
4LTMS 141 414 S16		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16
4LTMS 159 390 S16	3/4 ~			10	4	15	15.9	39	100	16
4LTMS 159 491 S16	3/4 ~			10	4	19	15.9	49.1	110	16
4LTMS 160 387 S16		3/4 ~		16	4	24	16	38.7	105	16
4LTMS 160 482 S16		3/4 ~		16	4	30	16	48.2	115	16
4LTMS 160 386 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16
4LTMS 160 487 S16			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16
4LTMS 160 461 S16	7/8 ~			9	4	16	16	46.1	110	16
4LTMS 160 442 S16		7/8 ~		14	4	24	16	44.2	110	16
4LTMS 160 519 S16	1 ~			8	4	16	16	51.9	120	16
4LTMS 160 515 S16		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16

American UN

단위 Unit: mm

Order Number	피치규격 Thread				Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	생크 Shank Dia d
	UNC	UNF	UNEF								
내부 금유형 (With coolant)											
4LTMS 0358 099 S04C	No.10, No.12	5/16 ~		24	4	9	3.58	9.9	45	4	
4LTMS 0358 131 S04C	No.10, No.12	5/16 ~		24	4	12	3.58	13.1	45	4	
4LTMS 038 099 S04C		No.10	No.12, 5/16 ~	32	4	12	3.8	9.9	45	4	
4LTMS 038 130 S04C		No.10	No.12, 5/16 ~	32	4	16	3.8	13	45	4	
4LTMS 0415 110 S06C	No.12	5/16 ~, 3/8 ~		24	4	10	4.15	11	60	6	
4LTMS 0415 152 S06C	No.12	5/16 ~, 3/8 ~		24	4	14	4.15	15.2	60	6	
4LTMS 043 112 S06C		No.12, 1/4 ~	7/16 ~	28	4	12	4.3	11.2	60	6	
4LTMS 043 149 S06C		No.12, 1/4 ~	7/16 ~	28	4	16	4.3	14.9	60	6	
4LTMS 044 114 S06C			No.12, 1/4 ~, 5/16 ~	32	4	14	4.4	11.4	60	6	
4LTMS 044 154 S06C			No.12, 1/4 ~, 5/16 ~	32	4	19	4.4	15.4	60	6	
4LTMS 0488 132 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	10	4.88	13.2	60	6	
4LTMS 0488 170 S06C	1/4 ~	7/16 ~, 1/2 ~		20	4	13	4.88	17	60	6	
4LTMS 0515 131 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	14	5.15	13.1	60	6	
4LTMS 0515 167 S06C		1/4 ~	7/16 ~, 1/2 ~	28	4	18	5.15	16.7	60	6	
4LTMS 0615 160 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	11	6.15	16	65	8	
4LTMS 0615 217 S08C	5/16 ~	9/16 ~, 5/8 ~		18	4	15	6.15	21.7	75	8	
4LTMS 0668 163 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	15	6.68	16.3	65	8	
4LTMS 0668 205 S08C		5/16 ~, 3/8 ~	9/16 ~	24	4	19	6.68	20.5	75	8	
4LTMS 0765 196 S08C	3/8 ~	3/4 ~		16	4	12	7.65	19.6	65	8	
4LTMS 0765 244 S08C	3/8 ~	3/4 ~		16	4	15	7.65	24.4	75	8	
4LTMS 082 195 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	18	8.2	19.5	75	10	
4LTMS 082 247 S10C		3/8 ~	9/16 ~, 5/8 ~	24	4	23	8.2	24.7	80	10	
4LTMS 090 224 S10C	7/16 ~	7/8 ~		14	4	12	9	22.4	75	10	
4LTMS 090 297 S10C	7/16 ~	7/8 ~		14	4	16	9	29.7	80	10	
4LTMS 096 221 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	17	9.6	22.1	75	10	
4LTMS 096 284 S10C		7/16 ~, 1/2 ~	3/4 ~	20	4	22	9.6	28.4	80	10	
4LTMS 099 221 S10C			7/16 ~, 1/2 ~	28	4	24	9.9	22.1	75	10	
4LTMS 099 285 S10C			7/16 ~, 1/2 ~	28	4	31	9.9	28.5	80	10	
4LTMS 1035 261 S12C	1/2 ~			13	4	13	10.35	26.1	80	12	
4LTMS 1035 339 S12C	1/2 ~			13	4	17	10.35	33.9	90	12	
4LTMS 111 259 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	20	11.1	25.9	80	12	
4LTMS 111 322 S12C		1/2 ~	3/4 ~, 13/16 ~	20	4	25	11.1	32.2	90	12	
4LTMS 118 283 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	13	11.8	28.3	80	12	
4LTMS 118 367 S12C	9/16 ~	1 ~, 1-1/8 ~		12	4	17	11.8	36.7	90	12	
4LTMS 125 287 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	20	12.5	28.7	95	14	
4LTMS 125 372 S14C		9/16 ~, 5/8 ~	11/16 ~	18	4	26	12.5	37.2	100	14	
4LTMS 129 290 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	27	12.9	29	95	14	
4LTMS 129 364 S14C			9/16 ~, 5/8 ~, 11/16 ~	24	4	34	12.9	36.4	100	14	
4LTMS 131 331 S14C	5/8 ~			11	4	14	13.1	33.1	95	14	
4LTMS 131 424 S14C	5/8 ~			11	4	18	13.1	42.4	105	14	
4LTMS 141 316 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	22	14.1	31.6	95	16	
4LTMS 141 414 S16C		5/8 ~	11/16 ~, 1-1/8 ~	18	4	29	14.1	41.4	105	16	
4LTMS 159 390 S16C	3/4 ~			10	4	15	15.9	39	100	16	
4LTMS 159 491 S16C	3/4 ~			10	4	19	15.9	49.1	110	16	
4LTMS 160 387 S16C		3/4 ~		16	4	24	16	38.7	105	16	
4LTMS 160 482 S16C		3/4 ~		16	4	30	16	48.2	115	16	
4LTMS 160 386 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	30	16	38.6	105	16	
4LTMS 160 487 S16C			3/4 ~, 13/16 ~, 7/8 ~	20	4	38	16	48.7	115	16	
4LTMS 160 461 S16C	7/8 ~			9	4	16	16	46.1	110	16	
4LTMS 160 442 S16C		7/8 ~		14	4	24	16	44.2	110	16	
4LTMS 160 519 S16C	1 ~			8	4	16	16	51.9	120	16	
4LTMS 160 515 S16C		1 ~, 1-1/8 ~, 1-1/2 ~		12	4	24	16	51.5	120	16	

4날 범용 헬릭스 니크 타입 쓰레드밀



- **HRc 62이하의 절처리강, 프리하드강, 합금강, 탄소강, 주철 가공**
 - 높은 절삭 속도와 날 당 높은 이송이 가능합니다.
 - 최대 나사가공 깊이 : 2xD, 2.5xD, 3xD(나사가공 직경)
 - 더 깊은 나사가공을 위한 헬리컬 리브 타입을 채용하였습니다.
 - 헬리코일 나사가공이 가능합니다.
 - 오른나사 및 왼나사 작업이 모두 가능합니다.
-
- **Thread mills for Hardened steels(up to HRc 62), pre-hardened steels, alloy steels, carbon steels, cast irons**
 - High spindle speed and feed per tooth are available.
 - Maximum drilling depth : 2xD, 2.5xD, 3xD(threading diameter)
 - Rib type helical design is applied for deep threading.
 - It can be used for heli coil threading.
 - Both right and left threading are available.

ISO 측정항목

521P

단위 Unit: mm

Order Number	피치 규격		날수	날경	나사부길이	유효장	전장	샹크
	Thread	Pitch	Flutes	Diameter	Thread Length	Effective Length	Overall Length	Shank Dia
			Z	D	L1	L2	L	d

외부 급유형 (Without coolant)

4NKTM 022 060 S06 M3	M3	0.5	4	2.2	6	-	60	6
4NKTM 022 080 S06 M3	M3	0.5	4	2.2	8	-	60	6
4NKTM 024 090 S04 M3	M3	0.5	4	2.4	5.47	9	45	4
4NKTM 029 084 S06 M4	M4	0.7	4	2.9	8.4	-	60	6
4NKTM 029 112 S06 M4	M4	0.7	4	2.9	11.2	-	60	6
4NKTM 0315 120 S04 M4	M4	0.7	4	3.15	7.64	12	45	4
4NKTM 038 112 S06 M5	M5	0.8	4	3.8	11.2	-	60	6
4NKTM 038 128 S06 M5	M5	0.8	4	3.8	12.8	-	60	6
4NKTM 039 150 S04 M5	M5	0.8	4	3.9	8.73	15	50	4
4NKTM 045 120 S06 M6	M6	1	4	4.5	12	-	60	6
4NKTM 045 160 S06 M6	M6	1	4	4.5	16	-	60	6
4NKTM 048 180 S06 M6	M6	1	4	4.8	10.9	18	60	6
4NKTM 060 175 S06 M8	M8	1.25	4	6	17.5	-	65	6
4NKTM 060 200 S06 M8	M8	1.25	4	6	20	-	65	6
4NKTM 065 240 S08 M8	M8	1.25	4	6.5	13.62	24	65	8
4NKTM 075 210 S08 M10	M10	1.5	4	7.5	21	-	75	8
4NKTM 075 270 S08 M10	M10	1.5	4	7.5	27	-	75	8
4NKTM 082 300 S10 M10	M10	1.5	4	8.2	16.34	30	75	10
4NKTM 095 245 S10 M12	M12	1.75	4	9.5	24.5	-	80	10
4NKTM 095 315 S10 M12	M12	1.75	4	9.5	31.5	-	80	10
4NKTM 099 360 S10 M12	M12	1.75	4	9.9	19.06	36	85	10
4NKTM 100 280 S10 M14	M14	2	4	10	28	-	85	10
4NKTM 100 360 S10 M14	M14	2	4	10	36	-	90	10
4NKTM 116 420 S12 M14	M14	2	4	11.6	21.75	42	90	12
4NKTM 120 320 S12 M16	M16	2	4	12	32	-	95	12
4NKTM 120 400 S12 M16	M16	2	4	12	40	-	100	12
4NKTM 136 480 S14 M16	M16	2	4	13.6	25.75	48	100	14
4NKTM 140 400 S14 M18	M18	2.5	4	14	40	-	95	14
4NKTM 140 450 S14 M18	M18	2.5	4	14	45	-	105	14
4NKTM 160 400 S16 M20	M20	2.5	4	16	40	-	105	16
4NKTM 160 500 S16 M20	M20	2.5	4	16	50	-	115	16

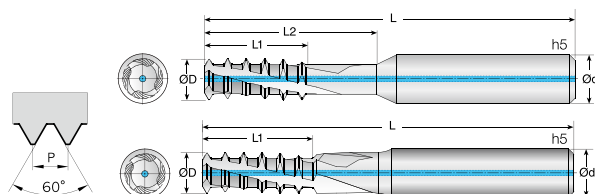
ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수	날경	나사부 길이	유효장	전장	샹크
	Thread	Pitch	Flutes Z	Diameter D	Thread Length L1	Effective Length L2	Overall Length L	Shank Dia d

내부 급유형 (With coolant)

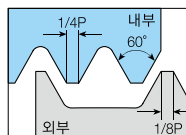
4NKTM 045 120 S06 M6C	M6	1	4	4.5	12	-	60	6
4NKTM 045 160 S06 M6C	M6	1	4	4.5	16	-	60	6
4NKTM 048 180 S06 M6C	M6	1	4	4.8	10.9	18	60	6
4NKTM 060 175 S06 M8C	M8	1.25	4	6	17.5	-	65	6
4NKTM 060 200 S06 M8C	M8	1.25	4	6	20	-	65	6
4NKTM 065 240 S08 M8C	M8	1.25	4	6.5	13.62	24	65	8
4NKTM 075 210 S08 M10C	M10	1.5	4	7.5	21	-	75	8
4NKTM 075 270 S08 M10C	M10	1.5	4	7.5	27	-	75	8
4NKTM 082 300 S10 M10C	M10	1.5	4	8.2	16.34	30	75	10
4NKTM 095 245 S10 M12C	M12	1.75	4	9.5	24.5	-	80	10
4NKTM 095 315 S10 M12C	M12	1.75	4	9.5	31.5	-	80	10
4NKTM 099 360 S10 M12C	M12	1.75	4	9.9	19.06	36	85	10
4NKTM 100 280 S10 M14C	M14	2	4	10	28	-	85	10
4NKTM 100 360 S10 M14C	M14	2	4	10	36	-	90	10
4NKTM 116 420 S12 M14C	M14	2	4	11.6	21.75	42	90	12
4NKTM 120 320 S12 M16C	M16	2	4	12	32	-	95	12
4NKTM 120 400 S12 M16C	M16	2	4	12	40	-	100	12
4NKTM 136 480 S14 M16C	M16	2	4	13.6	25.75	48	100	14
4NKTM 140 400 S14 M18C	M18	2.5	4	14	40	-	95	14
4NKTM 140 450 S14 M18C	M18	2.5	4	14	45	-	105	14
4NKTM 160 400 S16 M20C	M20	2.5	4	16	40	-	105	16
4NKTM 160 500 S16 M20C	M20	2.5	4	16	50	-	115	16



- **알루미늄, 알루미늄 합금 등 비철 비금속 가공**
- 높은 절삭 속도와 날 당 높은 이송이 가능합니다.
- 최대 나사가공 길이 : 2xD, 2.5xD, 3xD(나사가공 직경)
- 더 깊은 나사가공을 위한 헬리컬 리브 타입을 채용하였습니다.
- 헬리컬리브 나사 가공이 가능합니다.
- 오르나사 및 원나사 작업이 모두 가능합니다.

- Thread mills for Aluminum, Aluminum alloys, non-ferrous, and non-metallic materials

- High spindle speed and feed per tooth are available.
- Maximum drilling depth : 2xD, 2.5xD, 3xD (threading diameter)
- Rib type helical design is applied for deep threading.
- It can be used for heli coil threading.
- Both right and left threading are available.



521P

ISO 측정항목

단위 Unit: mm

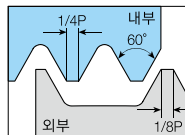
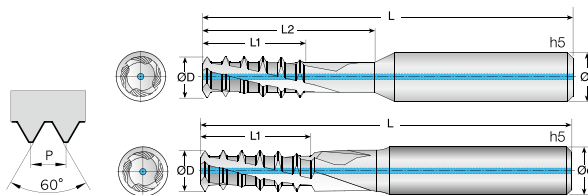
Order Number	피치 규격		날수	날경	나사부길	유효장	전장	샙크
	Thread	Pitch	Flutes Z	Diameter D	Thread Length L1	Effective Length L2	Overall Length L	Shank Dia d

외부 급유형 (Without coolant)

4NKTMA 022 060 S06 M3	M3	0.5	4	2.2	6	-	60	6
4NKTMA 022 080 S06 M3	M3	0.5	4	2.2	8	-	60	6
4NKTMA 024 090 S04 M3	M3	0.5	4	2.4	5.47	9	45	4
4NKTMA 029 084 S06 M4	M4	0.7	4	2.9	8.4	-	60	6
4NKTMA 029 112 S06 M4	M4	0.7	4	2.9	11.2	-	60	6
4NKTMA 0315 120 S04 M4	M4	0.7	4	3.15	7.64	12	45	4
4NKTMA 038 112 S06 M5	M5	0.8	4	3.8	11.2	-	60	6
4NKTMA 038 128 S06 M5	M5	0.8	4	3.8	12.8	-	60	6
4NKTMA 039 150 S04 M5	M5	0.8	4	3.9	8.73	15	50	4
4NKTMA 045 120 S06 M6	M6	1	4	4.5	12	-	60	6
4NKTMA 045 160 S06 M6	M6	1	4	4.5	16	-	60	6
4NKTMA 048 180 S06 M6	M6	1	4	4.8	10.9	18	60	6
4NKTMA 060 175 S06 M8	M8	1.25	4	6	17.5	-	65	6
4NKTMA 060 200 S06 M8	M8	1.25	4	6	20	-	65	6
4NKTMA 065 240 S08 M8	M8	1.25	4	6.5	13.62	24	65	8
4NKTMA 075 210 S08 M10	M10	1.5	4	7.5	21	-	75	8
4NKTMA 075 270 S08 M10	M10	1.5	4	7.5	27	-	75	8
4NKTMA 082 300 S10 M10	M10	1.5	4	8.2	16.34	30	75	10
4NKTMA 095 245 S10 M12	M12	1.75	4	9.5	24.5	-	80	10
4NKTMA 095 315 S10 M12	M12	1.75	4	9.5	31.5	-	80	10
4NKTMA 099 360 S10 M12	M12	1.75	4	9.9	19.06	36	85	10
4NKTMA 100 280 S10 M14	M14	2	4	10	28	-	85	10
4NKTMA 100 360 S10 M14	M14	2	4	10	36	-	90	10
4NKTMA 116 420 S12 M14	M14	2	4	11.6	21.75	42	90	12
4NKTMA 120 320 S12 M16	M16	2	4	12	32	-	95	12
4NKTMA 120 400 S12 M16	M16	2	4	12	40	-	100	12
4NKTMA 136 480 S14 M16	M16	2	4	13.6	25.75	48	100	14
4NKTMA 140 400 S14 M18	M18	2.5	4	14	40	-	95	14
4NKTMA 140 450 S14 M18	M18	2.5	4	14	45	-	105	14
4NKTMA 160 400 S16 M20	M20	2.5	4	16	40	-	105	16
4NKTMA 160 500 S16 M20	M20	2.5	4	16	50	-	115	16

단위 Unit: mm

THREAD MILL



ISO 측정항목

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단위 Unit: mm

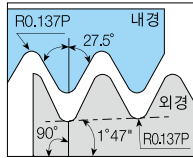
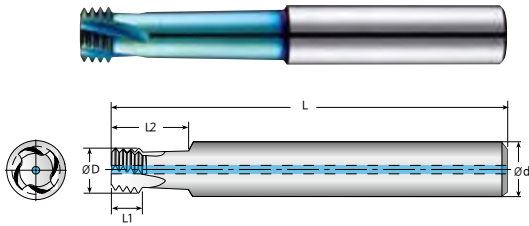
Order Number	피치 규격		날수	날경	나사부 길이	유효장	전장	샙크
	Thread	Pitch	Flutes	Diameter	Thread Length	Effective Length	Overall Length	Shank Dia
			Z	D	L1	L2	L	d

외부 급유형 (Without coolant)

4NKTMS 022 060 S06 M3	M3	0.5	4	2.2	6	-	60	6
4NKTMS 022 080 S06 M3	M3	0.5	4	2.2	8	-	60	6
4NKTMS 024 090 S04 M3	M3	0.5	4	2.4	5.47	9	45	4
4NKTMS 029 084 S06 M4	M4	0.7	4	2.9	8.4	-	60	6
4NKTMS 029 112 S06 M4	M4	0.7	4	2.9	11.2	-	60	6
4NKTMS 0315 120 S04 M4	M4	0.7	4	3.15	7.64	12	45	4
4NKTMS 038 112 S06 M5	M5	0.8	4	3.8	11.2	-	60	6
4NKTMS 038 128 S06 M5	M5	0.8	4	3.8	12.8	-	60	6
4NKTMS 039 150 S04 M5	M5	0.8	4	3.9	8.73	15	50	4
4NKTMS 045 120 S06 M6	M6	1	4	4.5	12	-	60	6
4NKTMS 045 160 S06 M6	M6	1	4	4.5	16	-	60	6
4NKTMS 048 180 S06 M6	M6	1	4	4.8	10.9	18	60	6
4NKTMS 060 175 S06 M8	M8	1.25	4	6	17.5	-	65	6
4NKTMS 060 200 S06 M8	M8	1.25	4	6	20	-	65	6
4NKTMS 065 240 S08 M8	M8	1.25	4	6.5	13.62	24	65	8
4NKTMS 075 210 S08 M10	M10	1.5	4	7.5	21	-	75	8
4NKTMS 075 270 S08 M10	M10	1.5	4	7.5	27	-	75	8
4NKTMS 082 300 S10 M10	M10	1.5	4	8.2	16.34	30	75	10
4NKTMS 095 245 S10 M12	M12	1.75	4	9.5	24.5	-	80	10
4NKTMS 095 315 S10 M12	M12	1.75	4	9.5	31.5	-	80	10
4NKTMS 099 360 S10 M12	M12	1.75	4	9.9	19.06	36	85	10
4NKTMS 100 280 S10 M14	M14	2	4	10	28	-	85	10
4NKTMS 100 360 S10 M14	M14	2	4	10	36	-	90	10
4NKTMS 116 420 S12 M14	M14	2	4	11.6	21.75	42	90	12
4NKTMS 120 320 S12 M16	M16	2	4	12	32	-	95	12
4NKTMS 120 400 S12 M16	M16	2	4	12	40	-	100	12
4NKTMS 136 480 S14 M16	M16	2	4	13.6	25.75	48	100	14
4NKTMS 140 400 S14 M18	M18	2.5	4	14	40	-	95	14
4NKTMS 140 450 S14 M18	M18	2.5	4	14	45	-	105	14
4NKTMS 160 400 S16 M20	M20	2.5	4	16	40	-	105	16
4NKTMS 160 500 S16 M20	M20	2.5	4	16	50	-	115	16

단위 Unit: mm

I'VE READ MILL



규격 정의 : B.S.21:1985
공차 등급 : 표준 BSPT(PT)



522P

American UN

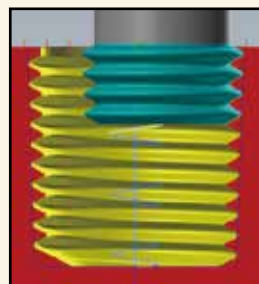
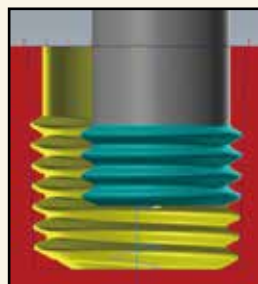
단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
외부 급유형 (Without coolant)									
4BSPT 055 200 S06	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPT 0931 335 S10	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPT 1334 440 S16	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPT 1484 420 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16

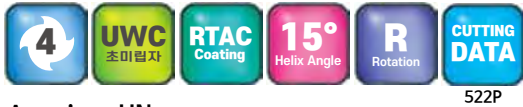
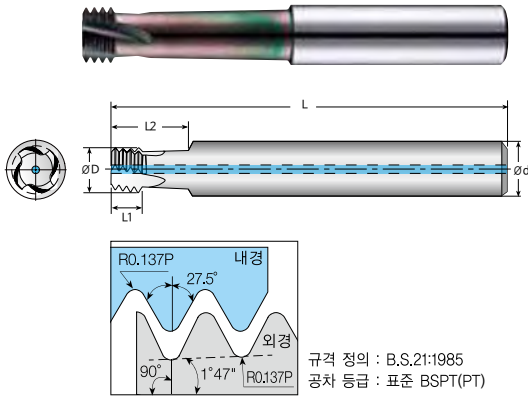
내부 급유형 (With coolant)									
4BSPT 055 200 S06C	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPT 0931 335 S10C	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPT 1334 440 S16C	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPT 1484 420 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16

나사공구이의수 4
경사각도 1.78991

나사공구이의수 3
경사각도 1.78991



- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가하므로, 3산으로 설정하여 사용하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.



American UN

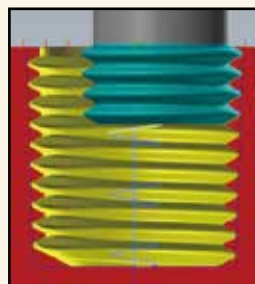
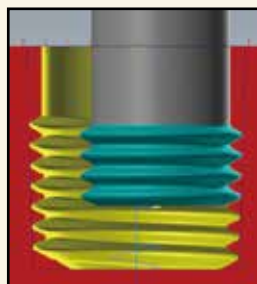
단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d
외부 급유형 (Without coolant)									
4BSPTA 055 200 S06	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPTA 0931 335 S10	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPTA 1334 440 S16	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPTA 1484 420 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16

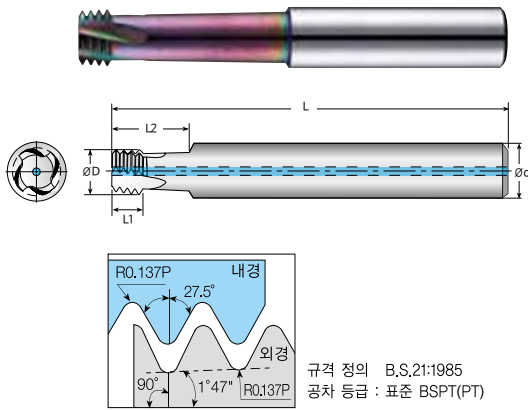
내부 급유형 (With coolant)									
4BSPTA 055 200 S06C	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPTA 0931 335 S10C	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPTA 1334 440 S16C	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPTA 1484 420 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16

나사공구이의수
경사각도

나사공구이의수
경사각도



- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가하므로, 3산으로 설정하여 사용하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.



SUS, 티타늄 합금 가공

- 내부 홀을 통한 효과적인 냉각수 공급이 가능합니다.
- 절삭 영역으로 직접 절삭유를 공급합니다.
- 외부 냉각을 사용할 수 없거나 효과가 없을 때 탁월합니다.
- 낮은 절삭부하를 위해 테이퍼 엔드밀 사용을 권장합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

Thread mills for SUS and Titanium alloys

- Effective cooling water supply is possible with coolant.
- Direct oil supplying is possible to cutting area.
- More effective when you cannot use outer coolant.
- Recommend to us Taper Endmill for low machining load.
- Both right and left threading are available.



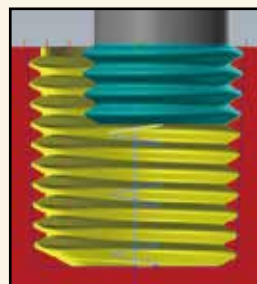
520P

American UN

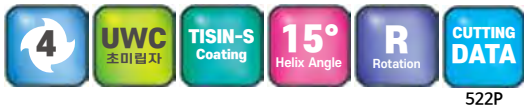
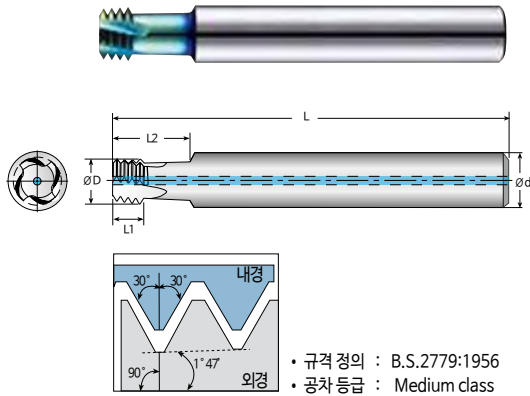
단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
외부 급유형 (Without coolant)									
4BSPTS 055 200 S06	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPTS 0931 335 S10	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPTS 1334 440 S16	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPTS 1484 420 S16	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16

내부 급유형 (With coolant)									
4BSPTS 055 200 S06C	1/16", 1/8"	28	4	4	5.5	3.6	20	60	6
4BSPTS 0931 335 S10C	1/4", 3/8"	19	4	4	9.31	5.2	33.5	70	10
4BSPTS 1334 440 S16C	1/2", 3/4"	14	4	4	13.34	7.1	44	90	16
4BSPTS 1484 420 S16C	1", 1 1/4", 1 1/2", 2"	11	4	4	14.84	9.1	42	105	16



- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가하므로, 3산으로 설정하여 사용하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.



American UN

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d
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외부 급유형 (Without coolant)

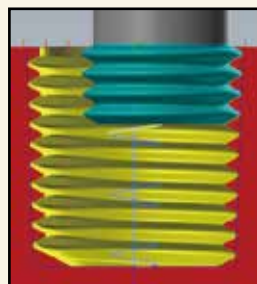
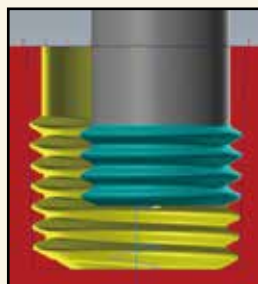
4NPTS 0555 105 S06	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTS 0937 155 S10	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTS 1357 260 S16	1/2", 5/8", 3/4"	14	4	4	13.57	7.3	26	90	16
4NPTS 1489 335 S16	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16

내부 급유형 (With coolant)

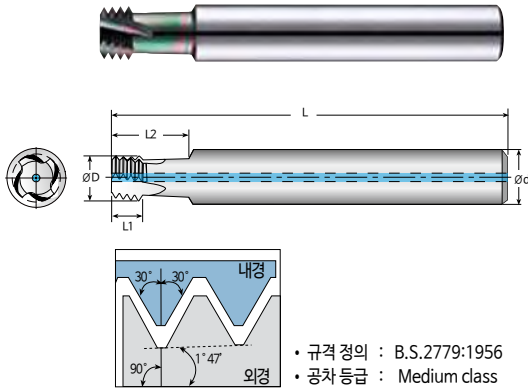
4NPTS 0555 105 S06C	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTS 0937 155 S10C	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTS 1357 260 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	13.57	7.3	26	90	16
4NPTS 1489 335 S16C	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16

나사공구이의수
경사각도

나사공구이의수
경사각도



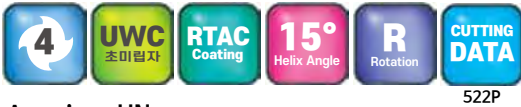
- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가하므로, 3산으로 설정하여 사용하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.



- 알루미늄, 알루미늄 합금 등 비철 비금속 가공
- 내부 홀을 통한 효과적인 냉각수 공급이 가능합니다.
- 절삭 영역으로 직접 절삭유를 공급합니다.
- 외부 냉각을 사용할 수 없거나 효과가 없을 때 탁월 합니다.
- 낮은 절삭부하를 위해 테이퍼 엔드밀 사용을 권장 합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

Thread mills for Aluminum, Aluminum alloys, non-ferrous, and non-metallic materials

- Effective cooling water supply is possible with coolant.
- Water directly supplies to threading face.
- It's more useful for the situation, which cannot be used cooling outside.
- Recommend to us Taper Endmill for low machining load.
- Both right and left threading are available.



American UN

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샹크 Shank Dia d
4NPTSA 0555 105 S06	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTSA 0937 155 S10	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTSA 1357 260 S16	1/2", 5/8", 3/4"	14	4	4	13.57	7.3	26	90	16
4NPTSA 1489 335 S16	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16

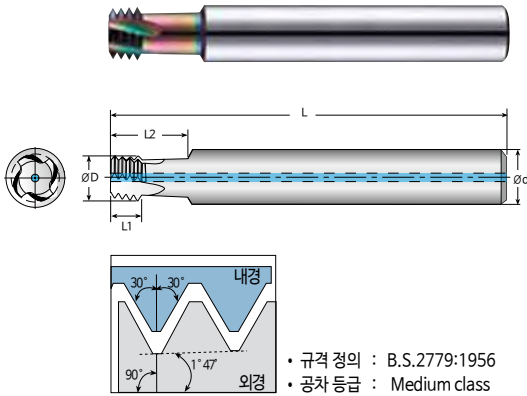
외부 급유형 (Without coolant)

내부 급유형 (With coolant)

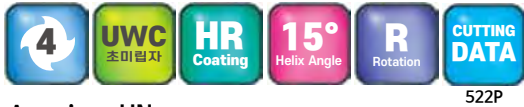
4NPTSA 0555 105 S06C	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTSA 0937 155 S10C	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTSA 1357 260 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	13.57	7.3	26	90	16
4NPTSA 1489 335 S16C	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16



- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가 하므로, 3산으로 설정하여 사용 하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.



• 규격 정의 : B.S.2779:1956
• 공차 등급 : Medium class



American UN

단위 Unit: mm

Order Number	나사 가능 규격 Thread	피치 규격 Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	유효장 Effective Length L2	전장 Overall Length L	샙크 Shank Dia d
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외부 급유형 (Without coolant)

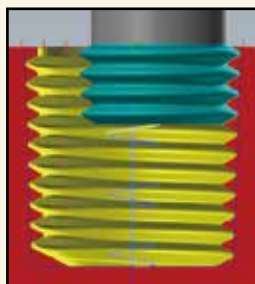
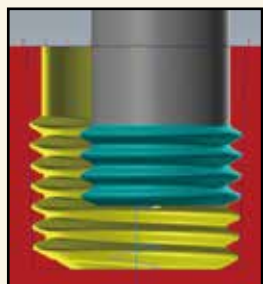
4NPTSS 0555 105 S06	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTSS 0937 155 S10	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTSS 1357 260 S16	1/2", 5/8", 3/4"	14	4	4	13.57	7.3	26	90	16
4NPTSS 1489 335 S16	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16

내부 급유형 (With coolant)

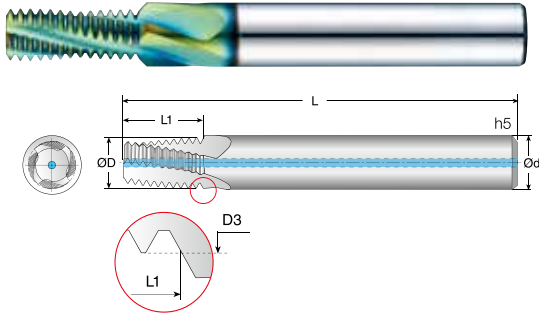
4NPTSS 0555 105 S06C	1/16", 1/8"	27	4	4	5.55	3.8	10.5	60	6
4NPTSS 0937 155 S10C	1/4", 3/8"	18	4	4	9.37	5.6	15.5	70	10
4NPTSS 1357 260 S16C	1/2", 5/8", 3/4", 7/8"	14	4	4	13.57	7.3	26	90	16
4NPTSS 1489 335 S16C	1", 1 1/4", 1 1/2", 2"	11.5	4	4	14.89	8.9	33.5	105	16

나사공구이의수
경사각도

나사공구이의수
경사각도



- 나사산 가공시에 4산 기준으로 프로그램 설정하면 게이지 측정이 불가하므로, 3산으로 설정하여 사용하십시오.
- When threading, it is not possible to measure the gauge when setting the program based on 4 threads, so set it to 3 threads and use it.

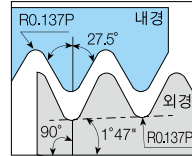


American UN

522P

- HRc 48 이하의 고경도강, 프리하든강, 합금강, 탄소강, 주철 가공
- 내부 홀을 통한 효과적인 냉각수 공급이 가능합니다.
- 절삭 영역으로 직접 절삭유를 공급하여 칩의 응착 현상을 제거합니다.
- 낮은 절삭부하를 위해 테이퍼 엔드밀 사용을 권장 합니다.
- 오른나사 및 왼나사 작업이 모두 가능합니다.

- Thread mills for Hardened steels (up to HRc 48), pre-hardened steels, alloy steels, carbon steels, cast irons
- Effective cooling water supply is possible with coolant.
- With coolant, it removes chip sticking.
- Using taper endmill is recommended to reduce cutting wear.
- Both right and left threading are available.

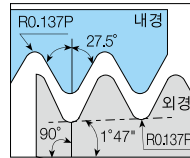
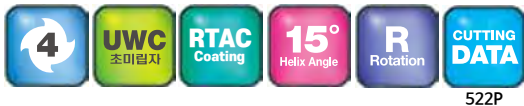
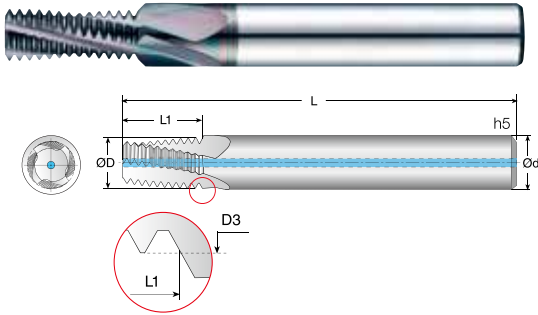


규격 정의 : B.S.21:1985
공차 등급 : 표준 BSPT

단위 Unit: mm

Order Number	피치 규격 Thread	Pitch (TPI)	날수 Flutes Z	산수 Teeth Zt	날경 Diameter D	나사부 길이 Thread Length L1	전장 Overall Length L	샙크 Shank Dia d
외부 급유형 (Without coolant)								
4BSTM 059 103 S06	1/16 ~, 1/8 ~	28	4	11	5.9	10.3	60	6
4BSTM 0765 103 S08	1/8 ~	28	4	11	7.65	10.3	60	8
4BSTM 099 152 S10	1/4 ~, 3/8 ~	19	4	11	9.9	15.2	70	10
4BSTM 1115 152 S12	3/8 ~	19	4	11	11.15	15.2	70	12
4BSTM 1425 224 S16	1/2 ~, 3/4 ~	14	4	12	14.25	22.4	90	16
4BSTM 160 285 S16	1", 1 1/4", 1 1/2", 2"	11	4	12	16	28.5	105	16

내부 급유형 (With coolant)								
4BSTM 059 103 S06C	1/16 ~, 1/8 ~	28	4	11	5.9	10.3	60	6
4BSTM 0765 103 S08C	1/8 ~	28	4	11	7.65	10.3	60	8
4BSTM 099 152 S10C	1/4 ~, 3/8 ~	19	4	11	9.9	15.2	70	10
4BSTM 1115 152 S12C	3/8 ~	19	4	11	11.15	15.2	70	12
4BSTM 1425 224 S16C	1/2 ~, 3/4 ~	14	4	12	14.25	22.4	90	16
4BSTM 160 285 S16C	1", 1 1/4", 1 1/2", 2"	11	4	12	16	28.5	105	16



규격 정의 : B.S.21:1985
공차 등급 : 표준 BSPT

American UN

단위 Unit: mm

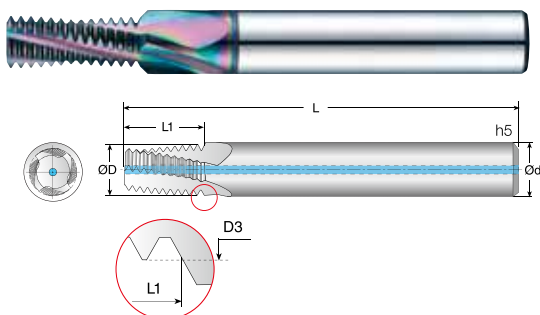
[illegible]

외부 급유형 (Without coolant)

내부 급유형 (With coolant)

[illegible]

4날 SUS 관용 테이퍼 나사 가공 쓰레드밀

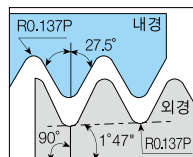


American UN

- SUS, 티타늄 합금 가공**
내부 홀을 통한 효과적인 냉각수 공급이 가능합니다.
절삭 영역으로 직접 절삭유를 공급하여 칩의 응착 현상을 제거합니다.
낮은 절삭부하를 위해 테이퍼 엔드밀 사용을 권장 합니다.
오른나사 및 왼나사 작업이 모두 가능합니다.

- Thread Mills for SUS, Titanium alloys

- Effective cooling water supply is possible with coolant.
- With coolant, it removes chip sticking.
- Using taper endmill is recommended to reduce cutting wear.
- Both right and left threading are available.



규격 정의 : B.S.21:1985
공차 등급 : 표준 BSPT

522P

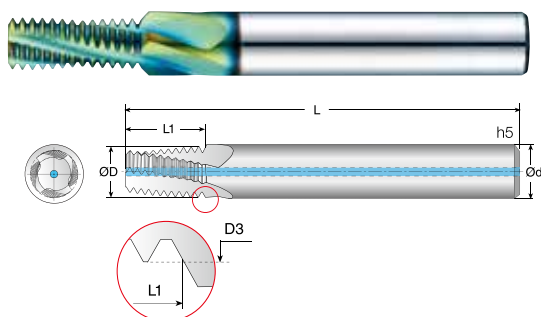
단위 Unit: mm

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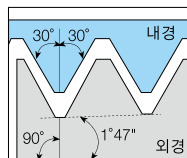
외부 급유형 (Without coolant)

[illegible]

내부 급유형 (With coolant)



522P



규격 정의 : USAS B2.1:1968
공차 등급 : 표준 NPT

American UN

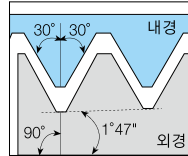
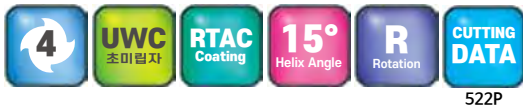
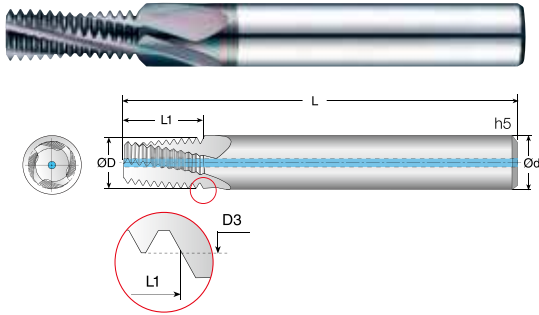
단위 Unit: mm

[illegible]

외부 급유형 (Without coolant)

[illegible]

내부 급유형 (With coolant)



규격 정의 : USAS B2.1:1968
공차 등급 : 표준 NPT

American UN

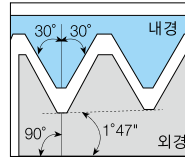
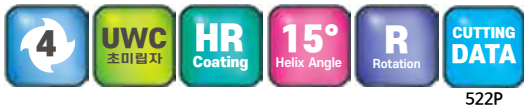
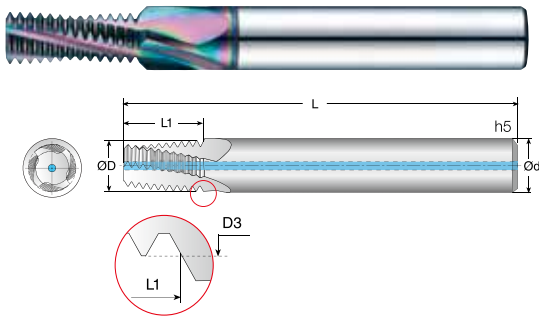
단위 Unit: mm

[illegible]

외부 급유형 (Without coolant)

[illegible]

내부 급유형 (With coolant)



규격 정의 : USAS B2.1:1968
공차 등급 : 표준 NPT

American UN

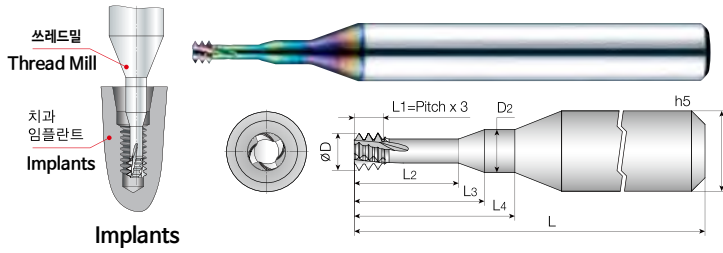
단위 Unit: mm

[illegible]

외부 급유형 (Without coolant)

내부 급유형 (With coolant)

[illegible]

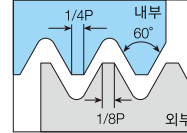


• 티타늄, 티타늄 합금 가공

- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩 제거를 통해 공구가 구멍 안에서 끊어지는 위험을 줄입니다.
- 팁 형상은 절삭 저항을 줄이고 공구 구부림을 억제합니다.

• Thread Mills for Titanium, Titanium alloys

- Rigid and powerful flutes design for inside hardening steel.
- Enhanced threading enables chip removal smoothly to reduce possible brokage of tool inside hole.
- The shape of tip reduces fraction and prevent tool bending.

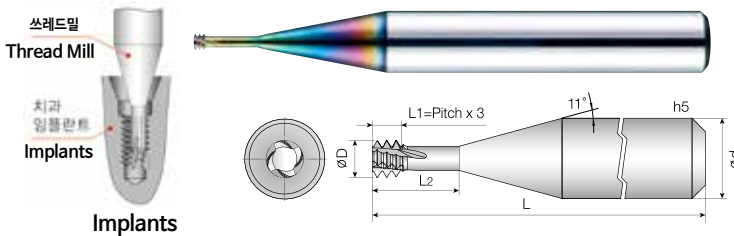


519P

ISO 측정항목

단위 Unit: mm

Order Number	피치 규격		날수		산수	날경	목부경	유효장			전장	샤크
	Thread	Pitch	Flutes	Teeth	Diameter	Neck Diameter	Effective Length			Overall Length	Shank Dia	
			Z	Zt	D	D2	L2	L3	L4	L	d	
외부 급유형 (Without coolant)												
4IMTM 009 025 S03 M012	M1.2	0.25	4	3	0.9	0.95	2.5	3.3	4.3	40	3	
4IMTM 0105 028 S03 M014	M1.4	0.3	4	3	1.05	1.1	2.8	3.5	5	40	3	
4IMTM 012 033 S03 M016	M1.6	0.35	4	3	1.2	1.25	3.3	4.2	5.9	40	3	
4IMTM 014 038 S03 M018	M1.8	0.35	4	3	1.4	1.45	3.8	4.7	6.6	40	3	
4IMTM 0154 039 S03 M2	M2	0.4	4	3	1.54	1.7	3.9	4.9	6.7	40	3	
4IMTM 0196 048 S03 M025	M2.5	0.45	4	3	1.96	2	4.8	5.8	8.2	40	3	

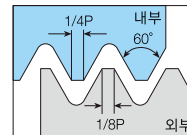


• 티타늄, 티타늄 합금 가공

- 경화강 내 나사 가공을 위한 견고하고 강력한 날 디자인.
- 향상된 절삭 및 칩 제거를 통해 공구가 구멍 안에서 끊어지는 위험을 줄입니다.
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519P

ISO 측정항목

단위 Unit: mm

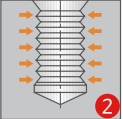
Order Number	피치 규격		날수	산수	날경	유효장	전장	샹크
	Thread	Pitch	Flutes Z	Teeth Zt	Diameter D	Effective Length L2	Overall Length L	Shank Dia d
외부 급유형 (Without coolant)								
4IMTM 0057 023 S06 M008	M0.8	0.2	4	3	0.57	2.3	50	6
4IMTM 0064 026 S06 M009	M0.9	0.225	4	3	0.64	2.6	50	6
4IMTM 0071 029 S06 M1	M1	0.25	4	3	0.71	2.9	50	6
4IMTM 0091 034 S06 M012	M1.2	0.25	4	3	0.91	3.4	50	6
4IMTM 0105 039 S06 M014	M1.4	0.3	4	3	1.05	3.9	50	6
4IMTM 012 045 S06 M016	M1.6	0.35	4	3	1.2	4.5	50	6
4IMTM 014 050 S06 M018	M1.8	0.35	4	3	1.4	5	50	6
4IMTM 0154 056 S06 M2	M2	0.4	4	3	1.54	5.6	50	6
4IMTM 0184 063 S06 M023	M2.3	0.4	4	3	1.84	6.3	50	6
4IMTM 0198 069 S06 M025	M2.5	0.45	4	3	1.98	6.9	50	6
4IMTM 0208 071 S06 M026	M2.6	0.45	4	3	2.08	7.1	50	6

2DM 2DTMS 스레드밀 - 가능한 원인들



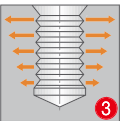
스레드 프로파일에 채워지거나 접착 된 칩 (Chips packed or glued at the thread profile)

- 열악한 냉각수 (Poor coolant)
- 냉각제 개선 (즉, 플러드 냉각제, 관통 구멍 용 측면 플루트 냉각제 공급 장치 추가)
Improve Coolant (i.e add flood coolant, lateral flute coolant supply for thru holes)
- 냉각수 플루트를 샹크에 추가하십시오.
Add coolant flutes on shank.



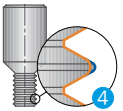
쓰레드 게이지는 피팅되지 않습니다. (Thread go-gage doesn't fit)

- 스레드가 너무 작음 (thread too small) → 오프셋 레지스터에서 공구 반경 감소 (Reduce tool radius in offset register)
- 스레드에 칩이 있음 (Chip in thread) → 냉각제 개선 (Improve coolant)



쓰레드가 점점 가늘어지고 있습니다. (Thread is getting tapered)

- 열악한 공구 클램핑 (Poor tool clamping)
- 공구 홀딩 (즉, 수축 끼워 맞춤 홀더) 개선 Improve tool holding (i.e shrink fit holders)
- 나사산 밀링 피드가 너무 높음 (thread milling feed too high) → 나사산 밀링 피드 감소 (reduce thread milling feed)
- 스레드 가공 횟수를 황삭, 정삭으로 나눠서 가공
(Machining by dividing the number of thread machining into roughing and finishing)



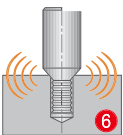
불규칙한 공구 마모 (Erratic tool wear)

- 공구가 너무 많이 소모 됨 → 공구 홀더 (예 : 단축 장막 홀더)를 사용하십시오.
- 스레드에 칩이 있음 (Chip in thread) → 냉각제 개선 (Improve coolant)



카운터 보어 칩이 공구 주변에 감겨 있습니다.

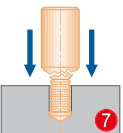
- (Counterbore chips are winding around the tool)
- 모따기 피드가 너무 낮음 (Chamfer feed too low)
- 모따기 피드가 증가합니다. (Increase chamfer feed)



시끄러운 드릴링 노이즈 (특히 최종 드릴링 깊이 방향)

Loud drilling noise (especially towards the final drilling depth)

- 칩 문제 (Chip problem)
- 드릴 이송 속도 감소 (reduce drill feed rate)
- 절삭유가 들어간 공구를 사용하십시오. (Use tool with coolant through)
- 펍주기 추가 (Add peck cycle)



드릴링 중 공구 파손 (특히 긴 칩핑 소재에서)

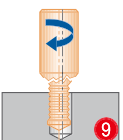
Tool breakage while drilling (especially in long chipping material)

- 칩 문제 (Chip problem)
- 드릴 이송 속도 감소 (reduce drill feed rate)
- 절삭유가 들어간 공구를 사용하십시오. (Use tool with coolant through)
- 펍주기 추가 (Add peck cycle)



틈새에 붙어있는 칩 (Chips glued up in the flutes)

- 열악한 냉각수 (Poor coolant)
- 냉각제 상황 개선 (Improve coolant situation)
- 절삭유가 들어간 공구를 사용하십시오. (Use tool with coolant through)
- 코팅 공구 사용 (Use coated tool)



쓰레드 밀링 중 공구 파손, 공구 파손 (Chippage, tool breakage while thread milling)

- 이송 속도 나사 밀링이 너무 높음 (feed rate thread milling too high)
- 보링 작업 후 칩 그루브에 칩이 없음을 확인하십시오
Check that the chip grooves are free of chips after the boring operation)
- 진동 (Vibrations)
- 이송 속도 감소 (NC피드가 중심점 또는 외부 트랙과 관련되는지 확인)
Reduce feed rate (Check whether Nc feeds relate to centre point or external track)



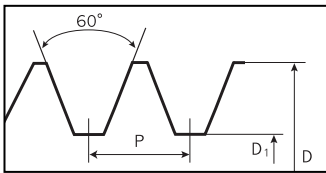
나사 표면이 좋지 않음 (고조파) Poor thread surface (harmonics)

- 진동 (Vibrations)
- 공구 홀더 확인 (모듈러 시스템을 사용하지 마십시오!)
(Check tool holder (do not use modular systems!))
- 공작물 클램핑 및 픽스처 확인. 클램핑 셋업이 불안정한 곳에서는 절삭력의 분포가 도입됩니다.
(Check workpiece clamping and fixture. Where the clamping set-up is unstable introduce a distribution of the cutting force.)
- 절단 속도 감소 (reduce cutting speed)
- 치아 이송 속도 증가 (Increase tooth feed rate)
- 절삭력의 분포를 소개 (Introduce distribution of cutting force)

나사산 예비 가공 홀 직경 - 탭가공 / 스레드 밀링

나사의 종류 및 기호

나사의 종류		기호	나사산 각도	규격	
미터 나사	보통 나사	M	60°	JIS B 0205	
	가는 나사			JIS B 0207	
항공 우주용 미터 나사	보통 나사	MJ	60°	ISO 5855	JIS B 0206
유니파이 나사	보통 나사	UNC	60°	ANSI B1.1	JIS B 0208
	가는 나사	UNF			
	아주 가는 나사	UNEF			
	특수 나사	UNS			
항공 우주용 인치 나사	보통 나사	UNJC	60°	MIL-S-8879	
	가는 나사	UNJF			
	아주 가는 나사	UNJEF			
	특수 나사	UNJ			
관용 테이퍼 나사	미국식 관용 테이퍼 나사	NPT	60°	ANSI/ASEM B1.20.1	
	미국식 드라이셀 관용 테이퍼 나사	NPTF		ANSI B1.20.3	
	영국식 관용 테이퍼 나사	PT(Rc)	55°	JIS B 0203	
관용 평행 나사	기계 결합용 관용 평행 나사	PF(G)	55°	JIS B 0202	
	내밀 용 관용 평행 나사	PS(Rp)		JIS B 0203	
영국 위트워스 나사	보통나사	BSW	55°	BS 84	



M, UNC, UNF, UNEF 도면

M 미터법 ISO 미세 나사산
DIN 13 및 DIN ISO 965-1

D		D ₁		
직 경 Diameter	피 치 Pitch	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
1	0.25	0.729	0.785	0.75
1.1	0.25	0.829	0.885	0.85
1.2	0.25	0.929	0.985	0.95
1.4	0.3	1.075	1.142	1.1
1.6	0.35	1.221	1.321	1.25
1.7	0.35	1.321	1.421	1.35
1.8	0.35	1.421	1.521	1.45
2	0.25	1.729	1.785	1.75
2	0.4	1.567	1.679	1.6
2.2	0.25	1.929	1.985	1.95
2.2	0.45	1.713	1.838	1.75
2.3	0.25	2.029	2.085	2.05
2.3	0.4	1.813	1.938	1.85
2.5	0.35	2.121	2.221	2.15
2.5	0.45	2.013	2.138	2.05
2.6	0.45	2.113	2.238	2.15
3	0.25	2.729	2.785	2.75
3	0.35	2.621	2.721	2.65
3	0.5	2.459	2.599	2.5
3.5	0.35	3.121	3.221	3.15
3.5	0.6	2.85	3.01	2.9
4	0.35	3.621	3.721	3.65
4	0.5	3.459	3.599	3.5
4	0.7	3.242	3.422	3.3
4.5	0.5	3.959	4.099	4
4.5	0.75	3.688	3.878	3.7
5	0.35	4.621	4.721	4.65
5	0.5	4.459	4.599	4.5
5	0.75	4.188	4.378	4.2
5	0.8	4.134	4.334	4.2

D		D ₁		
직 경 Diameter	피 치 Pitch	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
6	0.5	5.459	5.599	5.5
6	0.75	5.188	5.378	5.25
6	1	4.917	5.153	5
7	0.5	6.459	6.599	6.5
7	0.75	6.188	6.378	6.25
7	1	5.917	6.153	6
8	0.5	7.459	7.599	7.5
8	0.75	7.188	7.378	7.25
8	1	6.917	7.153	7
8	1.25	6.647	6.912	6.8
9	0.75	8.188	8.378	8.25
9	1	7.917	8.153	8
9	1.25	7.647	7.912	7.8
10	0.5	9.459	9.599	9.5
10	0.75	9.188	9.378	9.25
10	1	8.917	9.153	9
10	1.25	8.647	8.912	8.75
10	1.5	8.376	8.676	8.5
11	1	9.917	10.153	10
11	1.5	9.376	9.676	9.5
12	0.5	11.459	11.599	11.5
12	1	10.917	11.153	11
12	1.25	10.647	10.912	10.75
12	1.5	10.376	10.676	10.5
12	1.75	10.106	10.441	10.2
13	1	11.917	12.153	12
14	0.75	13.188	13.378	13.2
14	1	12.917	13.153	13
14	1.25	12.647	12.912	12.75
14	1.5	12.376	12.676	12.5

D		D ₁		
직경 Diameter	피치 Pitch	min (mm)	max (mm)	드릴 직경 Drill Dia.(mm)
14	2	11.835	12.21	12
15	1	13.917	14.153	14
15	1.5	13.376	13.676	13.5
16	0.75	15.188	15.378	15.2
16	1	14.917	15.153	15
16	1.25	14.647	14.912	14.8
16	1.5	14.376	14.676	14.5
16	2	13.835	14.21	14
17	1	15.917	16.153	16
18	1	16.917	17.153	17
18	1.5	16.376	16.676	16.5
18	2	15.835	16.21	16
18	2.5	15.294	15.744	15.5
20	1	18.917	19.153	19
20	1.5	18.376	18.676	18.5
20	2	17.835	18.21	18
20	2.5	17.294	17.744	17.5
22	1	20.917	21.153	21
22	1.5	20.376	20.676	20.5
22	2	19.835	20.21	20
22	2.5	19.294	19.744	19.5
24	1.5	22.376	22.676	22.5
24	2	21.835	22.21	22
24	3	20.752	21.252	21
25	1	22.917	23.153	23
25	1.5	23.376	23.676	23.5
26	1.5	24.376	24.676	24.5
27	1	25.917	26.153	26
27	1.5	25.376	25.676	25.5
27	2	24.835	25.21	25
27	3	23.752	24.252	24
28	1.5	26.376	26.676	26.5
28	2	25.835	26.21	26
30	1	28.917	29.153	29
30	1.5	28.376	28.676	28.5
30	2	27.835	28.21	28
30	3.5	26.211	26.771	26.5
32	1.5	30.376	30.676	30.5
32	2	29.835	30.21	30
33	1.5	31.376	31.676	31.5
33	2	30.835	31.21	31
33	3.5	29.211	29.771	29.5
34	1.5	32.376	32.676	32.5
35	1.5	33.376	33.676	33.5
36	1.5	34.376	34.676	34.5
36	2	33.835	34.21	34
36	3	32.752	33.252	33
36	4	31.67	32.27	32
38	1.5	36.376	36.676	36.5
39	1.5	37.376	37.676	37.5
39	2	36.835	37.21	37
39	3	35.752	36.252	36
39	4	34.67	35.27	35
40	1.5	38.376	38.676	38.5
40	2	37.835	38.21	38
40	3	36.752	37.252	37
42	1.5	40.376	40.676	40.5
42	2	39.835	40.21	40
42	3	38.752	37.252	39
42	4.5	37.129	37.799	37.5
45	1.5	43.376	40.676	43.5
45	2	42.835	40.21	43
45	3	41.752	42.252	42
45	4.5	40.129	40.799	40.5

D		D ₁		
직 경 Diameter	피 치 Pitch	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
48	1.5	46.376	46.676	46.5
48	2	45.835	46.21	46
48	3	44.752	45.252	45
48	5	42.587	43.297	43
50	1.5	48.376	48.676	48.5
50	2	47.835	48.21	48
50	3	46.752	47.252	47
52	1.5	50.376	50.676	50.5
52	2	49.835	50.21	50
52	3	46.587	47.087	49
52	5	46.587	47.297	47
56	1.5	54.376	54.676	54.5
56	2	53.835	54.21	54
56	3	52.752	53.252	53
56	5.5	50.046	50.796	50.5
58	1.5	56.376	56.676	56.5
60	1.5	58.376	58.676	58.5
60	2	57.835	58.21	58
60	3	56.752	57.252	57
60	5.5	54.046	54.796	54.5
64	6	57.505	58.305	58
68	6	62.505	62.305	62

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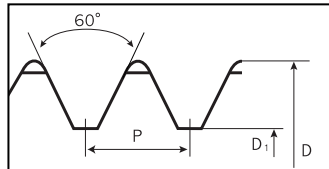
나사산 예비 가공 홀 직경 - 탭가공 / 스레드 밀링

UNF ASME B1.1에 따른
미세 나사산

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
0-80 UNF	1.181	1.306	1.25
1-72 UNF	1.473	1.613	1.55
2-64 UNF	1.755	1.913	1.85
3-56 UNF	2.024	2.197	2.15
4-48 UNF	2.271	2.459	2.40
5-44 UNF	2.550	2.741	2.70
6-40 UNF	2.819	3.023	2.95
8-36 UNF	3.404	3.607	3.50
10-32 UNF	3.962	4.166	4.10
12-28 UNF	4.496	4.724	4.60
1/4-28 UNF	5.367	5.580	5.50
5/16-24 UNF	6.792	7.038	6.90
3/8-24 UNF	8.379	8.626	8.50
7/16-20 UNF	9.738	10.030	9.90
1/2-20 UNF	11.326	11.618	11.50
9/16-18 UNF	12.761	13.084	12.90
5/8-18 UNF	14.348	14.671	14.50
3/4-16 UNF	17.330	17.689	17.50
7/8-14 UNF	20.262	20.663	20.40
1-12 UNF	23.109	23.569	23.25
1 1/8-12 UNF	26.284	26.744	26.50
1 1/4-12 UNF	29.459	29.919	29.50
1 3/8-12 UNF	32.634	33.094	33.00
1 1/2-12 UNF	35.809	36.269	36.10

UNEF

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
No.12-32 UNEF	4.826	4.623	4.70
1/4-32 UNEF	5.689	5.487	5.60
5/16-32	7.264	7.087	7.10
3/8-32	8.864	8.662	8.70
7/16-28	10.337	10.135	10.20
1/2-28	11.938	11.710	11.80
9/16-24	13.385	13.132	13.20
5/8-24	14.986	14.732	14.80
3/4-20	17.957	17.679	17.80
7/8-20	21.132	20.854	21.00
1-20	24.307	24.029	24.10
1 1/8-18	27.381	27.051	27.20
1 1/4-18	30.556	30.226	30.30
1 3/8-18	33.731	33.401	33.50
1 1/2-18	36.906	36.576	36.70
1 5/8-18	40.081	39.751	39.80



MJ, UNJC, UNJF 도면

MJ DIN ISO 5855에 따른
표준 나사산

D	D ₁			
직경 Diameter	피치 Pitch	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
MJ3	0.5	2.513	2.653	2.6
MJ4	0.7	3.318	3.498	3.4
MJ5	0.8	4.221	4.421	4.3
MJ6	1	5.026	5.215	5.1
MJ8	1.25	6.782	6.994	6.9
MJ10	1.5	8.539	8.779	8.7
MJ12	1.75	10.295	10.563	10.5
MJ16	2	14.051	14.351	14.3

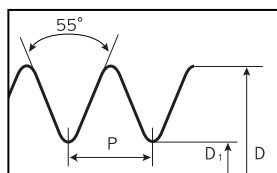
UNJC ASME B1.15 및 ISO 3161에 따른
보통 나사산

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
1-64 UNJC	1.467	1.570	1.50
2-56 UNJC	1.742	1.860	1.80
3-48 UNJC	1.999	2.137	2.05
4-40 UNJC	2.226	2.391	2.30
5-40 UNJC	2.556	2.721	2.65
6-32 UNJC	2.732	2.938	2.80
8-32 UNJC	3.393	3.599	3.50
10-24 UNJC	3.795	4.064	3.90
12-24 UNJC	4.455	4.704	4.60
1/4-20 UNJC	5.113	5.387	5.20
5/16-18 UNJC	6.563	6.833	6.70
3/8-16 UNJC	7.978	8.255	8.10
7/16-14 UNJC	9.344	9.637	9.50
1/2-13 UNJC	10.796	11.093	10.90
9/16-12 UNJC	12.226	12.480	12.30
5/8-11 UNJC	13.625	13.902	13.70
3/4-10 UNJC	16.575	16.880	16.75

UNJF ASME B1.15 및 ISO 3161에 따른
미세 나사산

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
0-80 UNJF	1.215	1.297	1.25
1-72 UNJF	1.510	1.602	1.55
2-64 UNJF	1.797	1.900	1.85
3-56 UNJF	2.073	2.191	2.10
4-48 UNJF	2.329	2.467	2.40
5-44 UNJF	2.613	2.763	2.70
6-40 UNJF	2.886	3.051	2.95
8-36 UNJF	3.479	3.662	3.60
10-32 UNJF	4.053	4.253	4.15
12-28 UNJF	4.602	4.815	4.70
1/4-28 UNJF	5.466	5.662	5.60
5/16-24 UNJF	6.907	7.110	7.00
3/8-24 UNJF	8.494	8.680	8.60
7/16-20 UNJF	9.875	10.083	10.00
1/2-20 UNJF	11.463	11.660	11.50
9/16-18 UNJF	12.913	13.123	13.00
5/8-18 UNJF	14.500	14.702	14.50

나사산 예비 가공 홀 직경 - 탭가공 / 스레드 밀링



PF(G), PS(Rp), BSW

PF(G) DIN EN ISO 228에 따른
관용 나사산

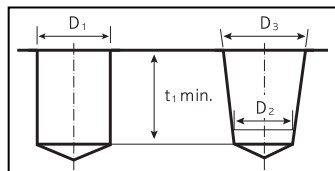
D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
PF(G) 1/16-28	6.561	6.843	6.80
PF(G) 1/8-28	8.566	8.848	8.80
PF(G) 1/4-19	11.445	11.890	11.80
PF(G) 3/8-19	14.950	15.395	15.25
PF(G) 1/2-14	18.632	19.173	19.00
PF(G) 5/8-14	20.588	21.129	21.00
PF(G) 3/4-14	24.118	24.659	24.50
PF(G) 7/8-14	27.878	28.419	28.25
PF(G) 1-11	30.292	30.932	30.75
PF(G) 1 1/8-11	34.940	35.580	35.50
PF(G) 1 1/4-11	38.953	39.593	39.50
PF(G) 1 3/8-11	41.366	42.006	41.90
PF(G) 1 1/2-11	44.846	45.486	45.25
PF(G) 1 3/4-11	50.789	51.429	51.00
PF(G) 2-11	56.657	57.297	57.00
PF(G) 2 1/4-11	62.753	63.393	63.00
PF(G) 2 1/2-11	72.227	72.867	72.60
PF(G) 3-11	84.927	85.567	85.00

BSW BS 84에 따른
Whitworth 나사산

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
1/16-60	1.045	1.231	1.2
3/32-48	1.703	1.911	1.9
1/8-40	2.362	2.59	2.5
5/32-32	2.952	3.213	3.1
3/16-24	3.407	3.745	3.6
7/32-24	4.201	4.539	4.5
1/4-20	4.724	5.155	5
5/16-18	6.131	6.591	6.5
3/8-16	7.493	7.988	7.9
7/16-14	8.79	9.33	9.2
1/2-12	9.989	10.59	10.5
9/16-12	11.577	12.178	12
5/8-11	12.919	13.558	13.4
3/4-10	15.798	16.484	16.4
7/8-9	18.612	19.354	19.25
1-8	21.335	22.148	22
1 1/8-7	23.929	24.833	24.75
1 1/4-7	27.104	28.008	27.5
1 3/8-6	29.505	30.529	30
1 1/2-6	32.68	33.704	33.5
1 5/8-5	34.771	35.965	35.5
1 3/4-5	37.946	39.14	39
1 7/8-4.5	40.398	41.705	41.5
2-4 1/2	43.573	44.88	44.5
2 1/4-4	49.02	50.468	50
2 1/2-4	55.37	56.818	56

PS(Rp) DIN EN10226-1에 따른
Whitworth 관용 나사산

D	D ₁		
직경 Diameter	min (mm)	max (mm)	드릴 직경 Drill Dia. (mm)
PS(Rp) 1/16-28	6.490	6.632	6.55
PS(Rp) 1/8-28	8.495	8.637	8.60
PS(Rp) 1/4-19	11.341	11.549	11.50
PS(Rp) 3/8-19	14.846	15.054	15.00
PS(Rp) 1/2-14	18.490	18.774	18.50
PS(Rp) 5/8-14	20.446	20.73	20.50
PS(Rp) 3/4-14	23.976	24.26	24.00
PS(Rp) 1-11	30.112	30.472	30.25
PS(Rp) 1 1/4-11	38.773	39.133	39.00
PS(Rp) 1 1/2-11	44.629	45.063	45.00
PS(Rp) 2-11	56.440	56.874	56.50
PS(Rp) 2 1/2-11	72.010	72.444	72.20
PS(Rp) 3-11	84.710	85.144	85.00



NPT, NPTF 도면

NPT ASME B1.20.1에 따른 관용 표준 나사산,
테이퍼 1:16

D				
직경 Diameter	D ₁	D ₂	D ₃	T ₁
1/16-27 NPT	6.150	5.950	6.39	10.7
1/8-27 NPT	8.400	8.310	8.74	10.8
1/4-18 NPT	11.100	10.730	11.36	15.6
3/8-18 NPT	14.300	14.150	14.80	16.0
1/2-14 NPT	17.900	17.470	18.32	20.8
3/4-14 NPT	23.300	22.790	23.67	21.3
1-11 1/2 NPT	29.000	28.640	29.69	25.6
1 1/4-11 1/2 NPT	37.700	3.370	38.45	26.1
1 1/2-11 1/2 NPT	43.700	43.440	44.52	26.1
2-11 1/2 NPT	55.600	55.450	56.56	26.5
2 1/2-8 NPT	66.300	66.140	67.62	36.3
3-8 NPT	82.300	81.900	83.52	38.5

NPTF ASME B1.20.3에 따른 미국 관용 표준 나사산,
테이퍼 1:16

D				
직경 Diameter	D ₁	D ₂	D ₃	T ₁
1/16-27 NPTF	6.1	5.97	6.41	10.3
1/8-27 NPTF	8.4	8.33	8.77	10.3
1/4-18 NPTF	11.0	10.77	11.40	15.0
3/8-18 NPTF	14.5	14.19	14.84	15.3
1/2-14 NPTF	17.5	17.48	18.33	19.9
3/4-14 NPTF	23.0	22.84	23.72	20.4
1-11 1/2 NPTF	29.0	28.62	29.76	24.5
1 1/4-11 1/2 NPTF	37.5	37.44	38.52	25.0
1 1/2-11 1/2 NPTF	43.5	43.50	44.59	25.0
2-11 1/2 NPTF	56.0	55.51	56.62	25.4
2 1/2-8 NPTF	66.0	66.03	67.71	38.0
3-8 NPTF	82.0	81.80	83.62	40.0

유니파이 계열 나사직경(와이어 프레임)_ UNC

SIZE	T.P.I	B inch MAJ DIA	mm 환산시
NO. 2	56	0.1092	2.7737
NO. 3	48	0.1261	3.2029
NO. 4	40	0.1445	3.6703
NO. 5	40	0.1575	4.0005
NO. 6	32	0.1786	4.5364
NO. 8	32	0.2046	5.1968
NO. 10	24	0.2441	6.2001
NO. 12	24	0.2701	6.8605
1/4	20	0.315	8.001
5/16	18	0.3847	9.7714
3/8	16	0.4562	11.5875
7/16	14	0.5303	13.4696
1/2	13	0.5999	15.2375
9/16	12	0.6708	17.0383
5/8	11	0.7431	18.8747
3/4	10	0.8799	22.3495
7/8	9	1.0193	25.8902
1	8	1.1624	29.525
1 1/8	7	1.3106	33.2892
1 1/4	7	1.4356	36.4642
1 3/8	6	1.5914	40.4216
1 1/2	6	1.7164	43.5966

유니파이 계열 나사직경(와이어 프레임)_ UNF

SIZE	T.P.I	B inch MAJ DIA	mm 환산시
NO. 3	56	0.1092	2.7737
NO. 4	48	0.1261	3.2029
NO. 5	44	0.1445	3.6703
NO. 6	40	0.1575	4.0005
NO. 8	36	0.1786	4.5364
NO. 10	32	0.2046	5.1968
1/4	28	0.2441	6.2001
5/16	24	0.2701	6.8605
3/8	24	0.315	8.001
7/16	20	0.3847	9.7714
1/2	20	0.4562	11.5875
9/16	18	0.5303	13.4696
5/8	18	0.5999	15.2375
3/4	16	0.6708	17.0383
7/8	14	0.7431	18.8747
1	12	0.8799	22.3495
1 1/8	12	1.0193	25.8902
1 1/4	12	1.1624	29.525
1 3/8	12	1.3106	33.2892
1 1/2	12	1.4356	36.4642

밀리미터(mm) 계열 나사직경(와이어 프레임)

SIZE	C MM
M2 x 0.4	2.520
M2.2 x 0.45	2.785
M2.5 x 0.45	3.085
M3 x 0.5	3.650
M3.5 x 0.6	4.279
M4 x 0.7	4.909
M5 x 0.8	6.039
M6 x 1.0	7.299
M7 x 1.0	8.299
M8 x 1.0	9.299
M8 x 1.25	9.624
M9 x 1.25	10.624
M10 x 1.25	11.624
M10 x 1.5	11.949
M11 x 1.5	12.949
M12 x 1.25	13.624
M12 x 1.5	14.131
M12 x 1.75	14.273
M14 x 1.5	15.949
M14 x 2.0	16.598
M16 x 1.5	17.949
M16 x 2.0	18.598
M18 x 1.5	19.949
M18 x 2.0	20.598
M18 x 2.5	21.248
M20 x 1.5	21.949
M20 x 2.0	22.598
M20 x 2.5	23.248
M22 x 1.5	23.949
M22 x 2.0	24.598
M22 x 2.5	25.248
M24 x 2.0	26.598
M24 x 3.0	27.897
M27 x 3.0	30.897
M30 x 3.5	34.547
M33 x 3.5	37.547
M36 x 4.0	41.196