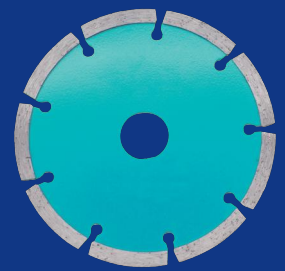
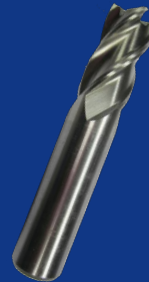




# CUTTING TOOLS

Professional Precision Processing



# CUTTING TOOLS

China Shanghai



## Profile

Founded in 2002, Shanghai Uni-Star quickly developed into a strong enterprise combining advantages of own production abilities and efficient trading team.

We are ready to provide you with an integrated solution starting from professional manufacturing, design and inspection, and reaching comprehensive sales supported by the best combination of high quality goods, competitive prices, excellent service and best-performing innovations.



## Our Manufacturing Basis includes

- 3 own factories;
- well-equipped modern laboratory;
- 1000 partner factories all over China.

## Our Service Abilities are assured by

- 50 employees;
- 4 Sales teams;
- 3 purchasing teams who are responsible for certain product categories;
- 5000m<sup>2</sup> of warehouse area.

## Our Sales Experience is based on

- 20 years of exporting activity;
- Hundreds of customers all over the world;
- Good knowledge of the markets involved.

Shanghai Uni-star's main directions are cutting tools, measuring tools, fasteners and hand tools. Our factories and laboratories are constantly modernized to reach higher quality of products and improve any aspects of the service. Our product range is rapidly expanding to meet any of your needs on the best terms and within the shortest period of time.

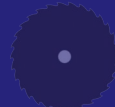
**With us, you will get high-quality products at the best prices enjoying efficient approach and excellent service. You are right to choose us!**

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*Short Machine taps for metric ISO threads,  
with straight flute*

*Type: Sets of 2 pcs-straight flute  
Singular-Straight flute, Spiral pointed,  
Spiral flute*

*Tolerance class: ISO 529*

*Material: HSS or Alloy tool steel*

D	P	L	I	D	P	L	I	D	P	L	I
M1	0.2	38.5	5.5	M5	0.8	58	20.5	M12	1.75	89	29
M1	0.25	38.5	5.5	M5.5	0.5	62	17	M13	1	80	22
M1.1	0.2	38.5	5.5	M6	0.5	66	19	M13	1.25	89	29
M1.1	0.25	38.5	5.5	M6	0.75	66	19	M13	1.5	89	29
M1.2	0.2	38.5	5.5	M6	1	66	24.5	M14	1	84	24
M1.2	0.25	38.5	5.5	M7	0.5	66	19	M14	1.25	95	30
M1.4	0.2	40	7	M7	0.75	66	19	M14	1.5	95	30
M1.4	0.3	40	7	M7	1	66	19	M14	2	95	30
M1.6	0.2	41	8	M8	0.5	66	19	M15	1	84	24
M1.6	0.35	41	8	M8	0.75	66	19	M15	1.5	95	30
M1.8	0.2	41	8	M8	1	72	22	M15	2	95	30
M1.8	0.35	41	8	M8	1.25	72	22	M16	1	90	29
M2	0.25	41	8	M9	0.5	66	19	M16	1.5	102	32
M2	0.4	41	8	M9	0.75	66	19	M16	2	102	32
M2.2	0.25	44.5	9.5	M9	1	72	22	M17	1	90	29
M2.2	0.45	44.5	9.5	M9	1.25	72	22	M17	1.5	102	32
M2.5	0.35	44.5	9.5	M10	0.75	69	19	M18	1	97	22
M2.5	0.45	44.5	12.5	M10	1	80	24	M18	1.5	112	37
M3	0.35	48	11	M10	1.25	80	24	M18	2	112	37
M3	0.5	48	14.5	M10	1.5	80	24	M18	2.5	112	37
M3.5	0.35	50	13	M11	0.75	80	22	M20	1	102	29
M3.5	0.6	50	13	M11	1	80	24	M20	1.5	112	37
M4	0.5	53	13	M11	1.25	85	25	M20	2	112	37
M4	0.7	53	17	M11	1.5	85	25	M20	2.5	112	37
M4.5	0.5	53	13	M12	1	84	24	M22	1	109	24
M4.5	0.75	53	13	M12	1.25	89	29	M22	1.5	118	38
M5	0.5	58	16	M12	1.5	89	29	M22	2	118	38

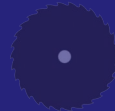


# Taps & Dies



Taps & Dies

D	P	L	I	D	P	L	I	D	P	L	I
M22	2.5	118	38	M38	1.5	149	39	M55	3	200	70
M24	1	113	33	M39	1.5	149	39	M55	4	200	70
M24	1.5	130	45	M39	2	149	39	M56	1.5	175	45
M24	2	130	45	M39	3	170	60	M56	2	175	45
M24	3	130	45	M39	4	170	60	M56	3	200	70
M25	1.5	130	45	M40	1.5	149	39	M56	4	200	70
M25	2	130	45	M40	2	149	39	M58	1.5	193	76
M26	1	120	25	M40	3	170	60	M58	2	193	76
M26	1.5	120	35	M42	1.5	149	39	M58	3	209	76
M27	1	120	33	M42	2	149	39	M58	4	209	76
M27	1.5	127	37	M42	3	170	60	M60	1.5	193	76
M27	2	127	37	M42	4	170	60	M60	2	193	76
M27	3	135	45	M42	4.5	170	60	M60	3	209	76
M28	1	120	25	M45	1.5	165	45	M60	4	209	76
M28	1.5	127	37	M45	2	165	45	M62	1.5	193	76
M28	2	127	37	M45	3	187	67	M62	2	193	76
M30	1	120	33	M45	4	187	67	M62	3	209	76
M30	1.5	127	37	M45	4.5	187	67	M62	4	209	76
M30	2	127	37	M48	1.5	165	45	M64	1.5	193	79
M30	3	138	48	M48	2	165	45	M64	2	193	79
M30	3.5	138	48	M48	3	187	67	M64	3	209	79
M32	1.5	137	37	M48	4	187	67	M64	4	209	79
M32	2	137	37	M48	5	187	67	M65	1.5	193	79
M33	1.5	137	37	M50	1.5	165	45	M65	2	193	79
M33	2	137	37	M50	2	165	45	M65	3	209	79
M33	3	151	51	M50	3	187	67	M65	4	209	79
M33	3.5	151	51	M52	1.5	175	45	M68	1.5	203	79
M35	1.5	144	39	M52	2	175	45	M68	2	203	79
M36	1.5	144	39	M52	3	200	70	M68	3	219	79
M36	2	144	39	M52	4	200	70	M68	4	219	79
M36	3	162	57	M55	1.5	175	45				
M36	4	162	57	M55	2	175	45				



*Hand taps for metric threads with straight flute*  
*Tolerance class: ISO 529*  
*Material: Alloy tool steel*

D	P	L	I	D	P	L	I	D	P	L	I
M1	0.2	38.5	5.5	M5	0.8	58	20.5	M12	1.75	89	29
M1	0.25	38.5	5.5	M5.5	0.5	62	17	M13	1	80	22
M1.1	0.2	38.5	5.5	M6	0.5	66	19	M13	1.25	89	29
M1.1	0.25	38.5	5.5	M6	0.75	66	19	M13	1.5	89	29
M1.2	0.2	38.5	5.5	M6	1	66	24.5	M14	1	84	24
M1.2	0.25	38.5	5.5	M7	0.5	66	19	M14	1.25	95	30
M1.4	0.2	40	7	M7	0.75	66	19	M14	1.5	95	30
M1.4	0.3	40	7	M7	1	66	19	M14	2	95	30
M1.6	0.2	41	8	M8	0.5	66	19	M15	1	84	24
M1.6	0.35	41	8	M8	0.75	66	19	M15	1.5	95	30
M1.8	0.2	41	8	M8	1	72	22	M15	2	95	30
M1.8	0.35	41	8	M8	1.25	72	22	M16	1	90	29
M2	0.25	41	8	M9	0.5	66	19	M16	1.5	102	32
M2	0.4	41	8	M9	0.75	66	19	M16	2	102	32
M2.2	0.25	44.5	9.5	M9	1	72	22	M17	1	90	29
M2.2	0.45	44.5	9.5	M9	1.25	72	22	M17	1.5	102	32
M2.5	0.35	44.5	9.5	M10	0.75	69	19	M18	1	97	22
M2.5	0.45	44.5	12.5	M10	1	80	24	M18	1.5	112	37
M3	0.35	48	11	M10	1.25	80	24	M18	2	112	37
M3	0.5	48	14.5	M10	1.5	80	24	M18	2.5	112	37
M3.5	0.35	50	13	M11	0.75	80	22	M20	1	102	29
M3.5	0.6	50	13	M11	1	80	24	M20	1.5	112	37
M4	0.5	53	13	M11	1.25	85	25	M20	2	112	37
M4	0.7	53	17	M11	1.5	85	25	M20	2.5	112	37
M4.5	0.5	53	13	M12	1	84	24	M22	1	109	24
M4.5	0.75	53	13	M12	1.25	89	29	M22	1.5	118	38
M5	0.5	58	16	M12	1.5	89	29	M22	2	118	38



# Taps & Dies

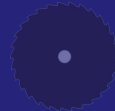


Taps & Dies

D	P	L	I
M22	2.5	118	38
M24	1	113	33
M24	1.5	130	45
M24	2	130	45
M24	3	130	45
M25	1.5	130	45
M25	2	130	45
M26	1	120	25
M26	1.5	120	35
M27	1	120	33
M27	1.5	127	37
M27	2	127	37
M27	3	135	45
M28	1	120	25
M28	1.5	127	37
M28	2	127	37
M30	1	120	33
M30	1.5	127	37
M30	2	127	37
M30	3	138	48
M30	3.5	138	48
M32	1.5	137	37
M32	2	137	37
M33	1.5	137	37
M33	2	137	37
M33	3	151	51
M33	3.5	151	51
M35	1.5	144	39
M36	1.5	144	39
M36	2	144	39
M36	3	162	57
M36	4	162	57
M38	1.5	149	39

D	P	L	I
M39	1.5	149	39
M39	2	149	39
M39	3	170	60
M39	4	170	60
M40	1.5	149	39
M40	2	149	39
M40	3	170	60
M42	1.5	149	39
M42	2	149	39
M42	3	170	60
M42	4	170	60
M42	4.5	170	60
M45	1.5	165	45
M45	2	165	45
M45	3	187	67
M45	4	187	67
M45	4.5	187	67
M48	1.5	165	45
M48	2	165	45
M48	3	187	67
M48	4	187	67
M48	5	187	67
M50	1.5	165	45
M50	2	165	45
M50	3	187	67
M52	1.5	175	45
M52	2	175	45
M52	3	200	70
M52	4	200	70
M55	1.5	175	45
M55	2	175	45
M55	3	200	70
M55	4	200	70

D	P	L	I
M56	1.5	175	45
M56	2	175	45
M56	3	200	70
M56	4	200	70
M58	1.5	193	76
M58	2	193	76
M58	3	209	76
M58	4	209	76
M60	1.5	193	76
M60	2	193	76
M60	3	209	76
M60	4	209	76
M62	1.5	193	76
M62	2	193	76
M62	3	209	76
M62	4	209	76
M64	1.5	193	79
M64	2	193	79
M64	3	209	79
M64	4	209	79
M65	1.5	193	79
M65	2	193	79
M65	3	209	79
M65	4	209	79
M68	1.5	203	79
M68	2	203	79
M68	3	219	79
M68	4	219	79



*Spiral point taps  
Ground threads  
Tolerance class: ISO 529  
Material: HSS*

D	P	L	I	D	P	L	I	D	P	L	I
M1	0.2	38.5	5.5	M5	0.8	58	20.5	M12	1.75	89	29
M1	0.25	38.5	5.5	M5.5	0.5	62	17	M13	1	80	22
M1.1	0.2	38.5	5.5	M6	0.5	66	19	M13	1.25	89	29
M1.1	0.25	38.5	5.5	M6	0.75	66	19	M13	1.5	89	29
M1.2	0.2	38.5	5.5	M6	1	66	24.5	M14	1	84	24
M1.2	0.25	38.5	5.5	M7	0.5	66	19	M14	1.25	95	30
M1.4	0.2	40	7	M7	0.75	66	19	M14	1.5	95	30
M1.4	0.3	40	7	M7	1	66	19	M14	2	95	30
M1.6	0.2	41	8	M8	0.5	66	19	M15	1	84	24
M1.6	0.35	41	8	M8	0.75	66	19	M15	1.5	95	30
M1.8	0.2	41	8	M8	1	72	22	M15	2	95	30
M1.8	0.35	41	8	M8	1.25	72	22	M16	1	90	29
M2	0.25	41	8	M9	0.5	66	19	M16	1.5	102	32
M2	0.4	41	8	M9	0.75	66	19	M16	2	102	32
M2.2	0.25	44.5	9.5	M9	1	72	22	M17	1	90	29
M2.2	0.45	44.5	9.5	M9	1.25	72	22	M17	1.5	102	32
M2.5	0.35	44.5	9.5	M10	0.75	69	19	M18	1	97	22
M2.5	0.45	44.5	12.5	M10	1	80	24	M18	1.5	112	37
M3	0.35	48	11	M10	1.25	80	24	M18	2	112	37
M3	0.5	48	14.5	M10	1.5	80	24	M18	2.5	112	37
M3.5	0.35	50	13	M11	0.75	80	22	M20	1	102	29
M3.5	0.6	50	13	M11	1	80	24	M20	1.5	112	37
M4	0.5	53	13	M11	1.25	85	25	M20	2	112	37
M4	0.7	53	17	M11	1.5	85	25	M20	2.5	112	37
M4.5	0.5	53	13	M12	1	84	24	M22	1	109	24
M4.5	0.75	53	13	M12	1.25	89	29	M22	1.5	118	38
M5	0.5	58	16	M12	1.5	89	29	M22	2	118	38





# Taps & Dies

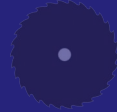


Taps & Dies

D	P	L	I
M22	2.5	118	38
M24	1	113	33
M24	1.5	130	45
M24	2	130	45
M24	3	130	45
M25	1.5	130	45
M25	2	130	45
M26	1	120	25
M26	1.5	120	35
M27	1	120	33
M27	1.5	127	37
M27	2	127	37
M27	3	135	45
M28	1	120	25
M28	1.5	127	37
M28	2	127	37
M30	1	120	33
M30	1.5	127	37
M30	2	127	37
M30	3	138	48
M30	3.5	138	48
M32	1.5	137	37
M32	2	137	37
M33	1.5	137	37
M33	2	137	37
M33	3	151	51
M33	3.5	151	51
M35	1.5	144	39
M36	1.5	144	39
M36	2	144	39
M36	3	162	57
M36	4	162	57
M38	1.5	149	39

D	P	L	I
M39	1.5	149	39
M39	2	149	39
M39	3	170	60
M39	4	170	60
M40	1.5	149	39
M40	2	149	39
M40	3	170	60
M42	1.5	149	39
M42	2	149	39
M42	3	170	60
M42	4	170	60
M42	4.5	170	60
M45	1.5	165	45
M45	2	165	45
M45	3	187	67
M45	4	187	67
M45	4.5	187	67
M48	1.5	165	45
M48	2	165	45
M48	3	187	67
M48	4	187	67
M48	5	187	67
M50	1.5	165	45
M50	2	165	45
M50	3	187	67
M52	1.5	175	45
M52	2	175	45
M52	3	200	70
M52	4	200	70
M55	1.5	175	45
M55	2	175	45
M55	3	200	70
M55	4	200	70

D	P	L	I
M56	1.5	175	45
M56	2	175	45
M56	3	200	70
M56	4	200	70
M58	1.5	193	76
M58	2	193	76
M58	3	209	76
M58	4	209	76
M60	1.5	193	76
M60	2	193	76
M60	3	209	76
M60	4	209	76
M62	1.5	193	76
M62	2	193	76
M62	3	209	76
M62	4	209	76
M64	1.5	193	79
M64	2	193	79
M64	3	209	79
M64	4	209	79
M65	1.5	193	79
M65	2	193	79
M65	3	209	79
M65	4	209	79
M68	1.5	203	79
M68	2	203	79
M68	3	219	79
M68	4	219	79



*Spiral flute taps  
Ground threads  
Tolerance class: ISO 529  
Material: HSS*

D	P	L	I	D	P	L	I	D	P	L	I
M1	0.2	38.5	5.5	M5	0.8	58	20.5	M12	1.75	89	29
M1	0.25	38.5	5.5	M5.5	0.5	62	17	M13	1	80	22
M1.1	0.2	38.5	5.5	M6	0.5	66	19	M13	1.25	89	29
M1.1	0.25	38.5	5.5	M6	0.75	66	19	M13	1.5	89	29
M1.2	0.2	38.5	5.5	M6	1	66	24.5	M14	1	84	24
M1.2	0.25	38.5	5.5	M7	0.5	66	19	M14	1.25	95	30
M1.4	0.2	40	7	M7	0.75	66	19	M14	1.5	95	30
M1.4	0.3	40	7	M7	1	66	19	M14	2	95	30
M1.6	0.2	41	8	M8	0.5	66	19	M15	1	84	24
M1.6	0.35	41	8	M8	0.75	66	19	M15	1.5	95	30
M1.8	0.2	41	8	M8	1	72	22	M15	2	95	30
M1.8	0.35	41	8	M8	1.25	72	22	M16	1	90	29
M2	0.25	41	8	M9	0.5	66	19	M16	1.5	102	32
M2	0.4	41	8	M9	0.75	66	19	M16	2	102	32
M2.2	0.25	44.5	9.5	M9	1	72	22	M17	1	90	29
M2.2	0.45	44.5	9.5	M9	1.25	72	22	M17	1.5	102	32
M2.5	0.35	44.5	9.5	M10	0.75	69	19	M18	1	97	22
M2.5	0.45	44.5	12.5	M10	1	80	24	M18	1.5	112	37
M3	0.35	48	11	M10	1.25	80	24	M18	2	112	37
M3	0.5	48	14.5	M10	1.5	80	24	M18	2.5	112	37
M3.5	0.35	50	13	M11	0.75	80	22	M20	1	102	29
M3.5	0.6	50	13	M11	1	80	24	M20	1.5	112	37
M4	0.5	53	13	M11	1.25	85	25	M20	2	112	37
M4	0.7	53	17	M11	1.5	85	25	M20	2.5	112	37
M4.5	0.5	53	13	M12	1	84	24	M22	1	109	24
M4.5	0.75	53	13	M12	1.25	89	29	M22	1.5	118	38
M5	0.5	58	16	M12	1.5	89	29	M22	2	118	38



# Taps & Dies

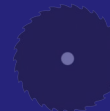


Taps & Dies

D	P	L	I
M22	2.5	118	38
M24	1	113	33
M24	1.5	130	45
M24	2	130	45
M24	3	130	45
M25	1.5	130	45
M25	2	130	45
M26	1	120	25
M26	1.5	120	35
M27	1	120	33
M27	1.5	127	37
M27	2	127	37
M27	3	135	45
M28	1	120	25
M28	1.5	127	37
M28	2	127	37
M30	1	120	33
M30	1.5	127	37
M30	2	127	37
M30	3	138	48
M30	3.5	138	48
M32	1.5	137	37
M32	2	137	37
M33	1.5	137	37
M33	2	137	37
M33	3	151	51
M33	3.5	151	51
M35	1.5	144	39
M36	1.5	144	39
M36	2	144	39
M36	3	162	57
M36	4	162	57
M38	1.5	149	39

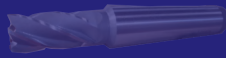
D	P	L	I
M39	1.5	149	39
M39	2	149	39
M39	3	170	60
M39	4	170	60
M40	1.5	149	39
M40	2	149	39
M40	3	170	60
M42	1.5	149	39
M42	2	149	39
M42	3	170	60
M42	4	170	60
M42	4.5	170	60
M45	1.5	165	45
M45	2	165	45
M45	3	187	67
M45	4	187	67
M45	4.5	187	67
M48	1.5	165	45
M48	2	165	45
M48	3	187	67
M48	4	187	67
M48	5	187	67
M50	1.5	165	45
M50	2	165	45
M50	3	187	67
M52	1.5	175	45
M52	2	175	45
M52	3	200	70
M52	4	200	70
M55	1.5	175	45
M55	2	175	45
M55	3	200	70
M55	4	200	70

D	P	L	I
M56	1.5	175	45
M56	2	175	45
M56	3	200	70
M56	4	200	70
M58	1.5	193	76
M58	2	193	76
M58	3	209	76
M58	4	209	76
M60	1.5	193	76
M60	2	193	76
M60	3	209	76
M60	4	209	76
M62	1.5	193	76
M62	2	193	76
M62	3	209	76
M62	4	209	76
M64	1.5	193	79
M64	2	193	79
M64	3	209	79
M64	4	209	79
M65	1.5	193	79
M65	2	193	79
M65	3	209	79
M65	4	209	79
M68	1.5	203	79
M68	2	203	79
M68	3	219	79
M68	4	219	79



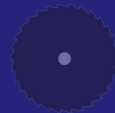
*Spiral point taps  
Ground threads  
Tolerance class: B.S.  
Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
1/8-40BSW	48	11	5/8-14BSF	102	32	1-3/4-7BSF	187	67
3/16-24BSW	58	16	11/16-11BSW	112	37	2-4-1/2BSW	200	70
3/16-32BSF	58	16	11/16-14BSF	112	37	2-7BSF	200	70
7/22-28BSF	62	17	3/4-10BSW	112	37			
1/4-20BSW	66	19	3/4-12BSF	112	37			
1/4-26BSF	66	19	7/8-9BSW	118	38			
9/32-26BSF	66	19	7/8-11BSF	118	38			
5/16-18BSW	72	22	1-8BSW	130	45			
5/16-22BSF	72	22	1-10BSF	130	45			
3/8-16BSW	80	24	1-1/8-7BSW	138	48			
3/8-20BSF	80	24	1-1/8-9BSF	138	48			
7/16-14BSW	85	25	1-1/4-7BSW	151	51			
7/16-18BSF	85	25	1-1/4-9BSF	151	51			
1/2-12BSW	89	29	1-3/8-8BSF	162	57			
1/2-16BSF	89	29	1-1/2-6BSW	170	60			
9/16-12BSW	95	30	1-1/2-8BSF	170	60			
9/16-16BSF	95	30	1-5/8-8BSF	170	60			
5/8-11BSW	102	32	1-3/4-5BSW	187	67			



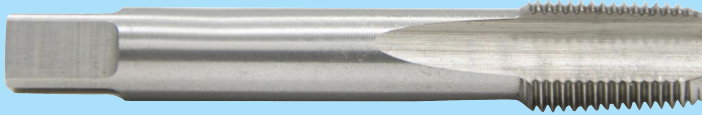
*Straight flute taps  
Ground threads  
Tolerance class: U.N.  
Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
NO.0-80UNF	41	8	1/4-28UNF	66	19	1-1/8-12UNF	127	37
NO.1-64UNC	41	8	5/16-18UNC	72	22	1-1/4-7UNC	151	51
NO.1-12UNF	41	8	5/16-24UNF	72	22	1-1/4-12UNF	137	37
NO.2-56UNC	44.5	10	3/8-16UNC	80	24	1-3/8-6UNC	162	57
NO.2-64UNF	44.5	9.5	3/8-24UNF	76	20	1-3/8-12UNF	144	39
NO.3-48UNC	44.5	9.5	7/16-14UNC	85	25	1-1/2-6UNC	170	60
NO.3-56UNF	44.5	9.5	7/16-20UNF	82	22	1-1/2-12UNF	149	39
NO.4-40UNC	48	14.5	1/2-13UNC	89	29	1-3/4-5UNC	187	67
NO.4-48UNF	48	11	1/2-20UNF	84	24	2-4-1/2UNC	200	70
NO.5-40UNC	48	14.5	9/16-12UNC	95	30	2-1/4-4-1/2UNC	221	76
NO.5-44UNF	48	11	9/16-18UNF	90	25	2-1/2-4UNC	224	79
NO.6-32UNC	50	16.5	5/8-11UNC	102	32	2-3/4-4UNC	234	79
NO.6-40UNF	50	13	5/8-18UNF	95	25	3-4UNC	258	83
NO.8-32UNC	53	13	3/4-10UNC	112	37	3-1/4-4UNC	261	86
NO.8-36UNF	53	13	3/4-16UNF	104	29	3-1/2-4UNC	261	86
NO.10-24UNC	58	20.5	7/8-9UNC	118	38	3-3/4-4UNC	279	89
NO.10-32UNF	58	16	7/8-14UNF	113	33	4-4UNC	279	89
NO.12-24UNC	62	21.5	1-8UNC	130	45			
NO.12-28UNF	62	17	1-12UNF	120	35			
1/4-20UNC	66	24.5	1-1/8-7UNC	138	48			



*Spiral point taps  
Ground threads  
Tolerance class: B.S.  
Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
1/8-40BSW	48	14.5	1/2-12BSW	89	29	2-4-1/2BSW	200	70
3/16-24BSW	58	20.5	1/2-16BSF	89	29	2-7BSF	200	70
3/16-32BSF	58	20.5	9/16-12BSW	95	30	2-1/4-4BSW	221	76
9/32-28BSF	62	17	9/16-16BSF	95	30	2-1/4-6BSF	221	76
1/4-20BSW	66	24.5	5/8-11BSW	102	32	2-1/2-4BSW	221	76
1/4-26BSF	66	24.5	5/8-14BSF	102	32	2-1/2-6BSF	224	79
9/32-26BSF	66	19	11/16-11BSW	112	37	2-3/4-3-1/2BSW	234	79
5/16-18BSW	72	22	11/16-14BSF	112	37	2-3/4-6BSF	234	79
5/16-22BSF	72	22	3/4-10BSW	112	37	3-3-1/2BSW	258	83
3/8-16BSW	80	24	3/4-12BSF	112	37	3-5BSF	258	83
3/8-20BSF	80	24	7/8-9BSW	118	38	3-1/4-3-1/4BSW	261	86
1/8-40BSW	48	11	7/8-11BSF	118	38	3-1/4-5BSF	261	86
3/16-24BSW	58	16	1-8BSW	130	45	3-1/2-3-1/4BSW	261	86
3/16-32BSF	58	16	1-10BSF	130	45	3-1/2-4-1/2BSF	261	86
7/32-28BSF	62	17	1-1/8-7BSW	138	48	3-3/4-3BSW	279	89
1/4-20BSW	66	19	1-1/8-9BSF	138	48	3-3/4-4-1/2BSF	279	89
1/4-26BSF	66	19	1-1/4-7BSW	151	51	4-3BSW	279	89
9/32-26BSF	66	19	1-1/4-9BSF	151	51	4-4-1/2BSF	279	89
5/16-18BSW	72	22	1-3/8-8BSF	162	57			
5/16-22BSF	72	22	1-1/2-6BSW	170	60			
3/8-16BSW	80	24	1-1/2-8BSF	170	60			
3/8-20BSF	80	24	1-5/8-8BSF	170	60			
7/16-14BSW	85	25	1-3/4-5BSW	187	67			
7/16-18BSF	85	25	1-3/4-7BSF	187	67			



*Taper pipe taps, NPT  
Ground threads  
Tolerance class: ASME  
Material: HSS*

SIZE	L	I
NPT1/16	54	17
NPT1/8	54	19
NPT1/4	62	27
NPT3/8	65	27

SIZE	L	I
NPT1/2	79	35
NPT3/4	83	35
NPT1	95	44
NPT1-1/4	102	44

SIZE	L	I
NPT1-1/2	108	44
NPT2	114	44

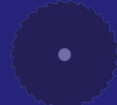


*Nut taps, DIN357  
Ground threads  
Tolerance class: DIN357  
Material: HSS*

D	P	L	I
M2	0.4	36	12
M2.2	0.45	36	14
M2.5	0.45	36	14
M3	0.35	40	11
M3	0.5	40	15
M3.5	0.35	45	11
M3.5	0.6	45	18
M4	0.5	50	15
M4	0.7	50	21
M5	0.5	55	15
M5	0.8	55	24
M6	0.75	55	22
M6	1	60	30
M8	0.75	55	22
M8	1	60	30
M8	1.25	65	36
M10	0.75	55	22
M10	1	60	30
M10	1.25	65	36
M10	1.5	70	40

D	P	L	I
M12	1	65	30
M12	1.25	70	36
M12	1.5	80	45
M12	1.75	80	47
M14	1	70	30
M14	1.5	80	45
M14	2	90	54
M16	1	70	30
M16	1.5	85	45
M16	2	95	58
M18	1	80	30
M18	1.5	90	45
M18	2	100	54
M18	2.5	110	62
M20	1	80	30
M20	1.5	90	45
M20	2	100	54
M20	2.5	110	62
M22	1	80	30
M39	3	160	80

D	P	L	I
M39	4	175	96
M42	1.5	135	45
M42	2	145	55
M42	3	170	80
M42	4.5	195	108
M45	1.5	135	45
M45	2	145	55
M45	3	170	80
M45	4.5	195	108
M48	1.5	145	45
M48	2	155	55
M48	3	180	80
M48	5	220	120
M52	1.5	145	45
M52	2	155	55
M52	3	180	80
M52	5	220	120



*Piper machine taps  
Ground threads  
Material: HSS*

SIZE	L	I
G1/16-28	52	16
G1/8-28	80	18
G1/4-19	90	25
G3/8-19	100	25
G1/2-14	125	32
G5/8-14	125	32
G3/4-14	135	32
G7/8-14	135	32

SIZE	L	I
G1-11	140	40
G1-1/8-11	140	40
G1-1/4-11	160	40
G1-1/2-11	160	40
G1-3/4-11	195	40
G2-11	195	40
G2-1/4-11	142	42
G2-1/2-11	153	45

SIZE	L	I
G2-3/4-11	163	46
G3-11	164	48
G3-1/2-11	173	50
G4-11-11	185	53



*Piper cone taps  
Ground threads  
Material: HSS*

SIZE	L	I
Rc1/16-28	52	14
Rc1/8-28	59	15
Rc1/4-19	67	19
Rc3/8-19	75	21
Rc1/2-14	87	26
Rc3/4-14	96	28

SIZE	L	I
Rc1-11-11	109	33
Rc1-1/4-11	119	36
Rc1-1/2-11	125	37
Rc2-11-11	140	41
Rc2-1/2-11	153	45
Rc3-11-11	164	48

SIZE	L	I
Rc3-1/2-11	173	50
Rc4-11-11	185	53





*Thread forming taps  
Ground threads  
Material: HSS*

D	P	L	I
M2	0.25	41	8
M2	0.4	41	8
M2.2	0.25	44.5	9.5
M2.2	0.45	44.5	9.5
M2.5	0.35	44.5	9.5
M2.5	0.45	44.5	9.5
M3	0.35	48	11
M3	0.45	48	11
M3.5	0.35	50	13
M3.5	0.6	50	13
M4	0.5	53	13
M4	0.7	53	13
M4.5	0.5	53	13
M4.5	0.75	53	13
M5	0.5	58	16
M5	0.8	58	16

D	P	L	I
M5.5	0.5	58	16
M6	0.5	66	19
M6	0.75	66	19
M6	1	66	19
M7	0.75	66	19
M7	1	66	19
M8	0.5	66	19
M8	0.75	69	19
M8	1	72	22
M8	1.25	72	22
M9	0.75	66	19
M9	1	72	22
M9	1.25	72	22
M10	0.75	69	19
M10	1	80	24
M10	1.25	80	24

D	P	L	I
M10	1.5	80	24
M11	0.75	80	19
M11	1	80	22
M11	1.5	85	25
M12	1	84	24
M12	1.25	89	29
M12	1.5	89	29
M12	1.75	89	29
M14	1	84	24
M14	1.25	95	30
M14	1.5	95	30
M14	2	95	30
M15	1.5	95	30
M16	1	90	29
M16	1.5	102	32
M16	2	102	32

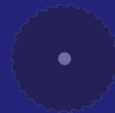


*Straight pipe taps  
Ground threads  
Material: HSS*

SIZE	L	I
1/16-27NPS	2-1/8	11/16
1/8-27NPS	2-1/8	3/4
*1/8-27NPS	2-1/8	3/4
1/4-18NPS	2-7/16	1-1/16
3/8-18NPS	2-9/16	1-1/16
1/2-14NPS	3-1/8	1-3/8

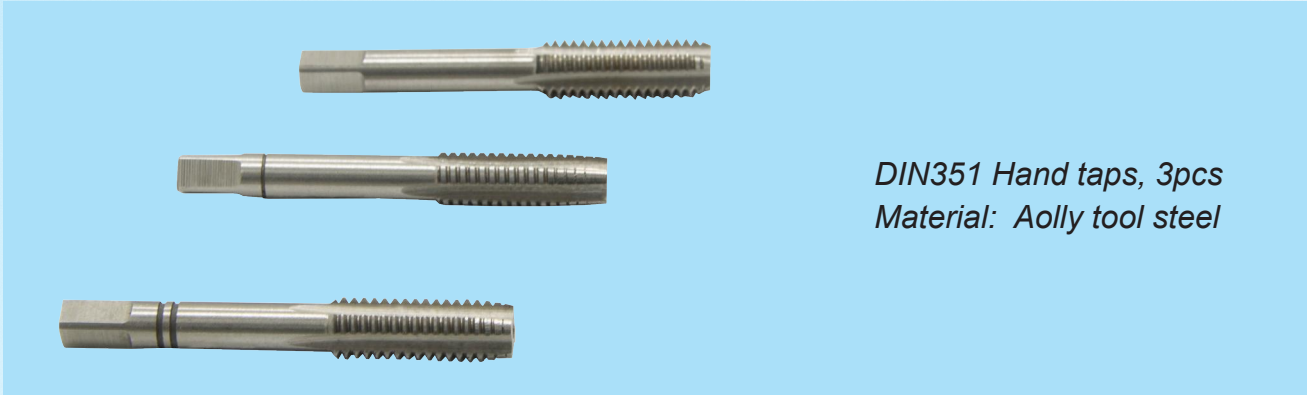
SIZE	L	I
3/4-14NPS	3-1/4	1-3/8
1-11-1/2NPS	3-3/4	1-3/4
1-1/4-11-1/2NPS	4	1-3/4
1-1/2-11-1/2NPS	4-1/4	1-3/4
2-11-1/2NPS	4-1/2	1-3/4
2-1/2-8NPS	5-1/2	2-9/16

SIZE	L	I
3-8NPS	6	2-5/8
3-1/2-8NPS	6-1/2	2-11/16
4-8NPS	6-3/4	2-3/4



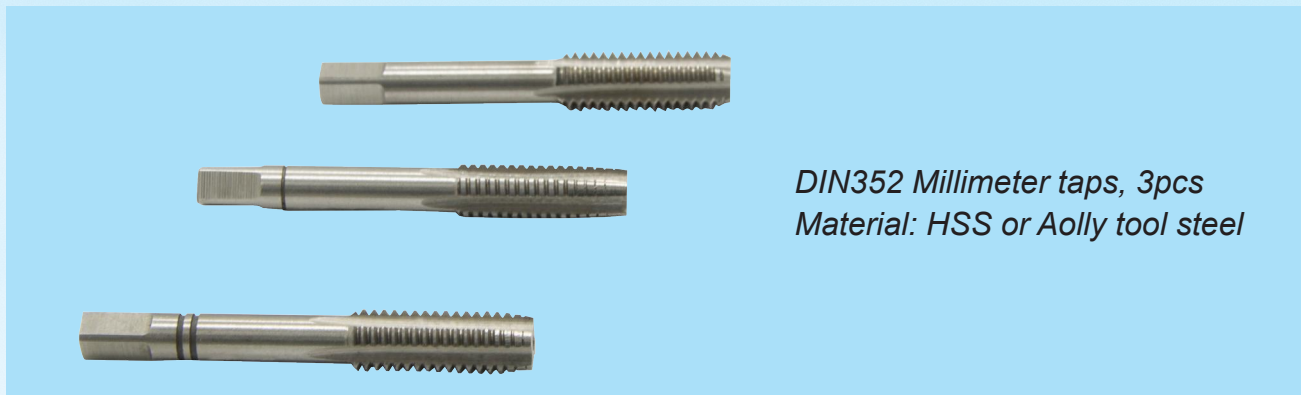
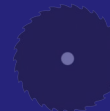
*Pulley taps  
Ground threads  
Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
1/4-20NC-H3	4	1	5/16-24NF-H3	6	1-1/8	3/4-16NF-H3	6	2
5/16-18NC-H3	4	1-1/8	3/8-16NC-H3	6	1-1/4	7/8-9NC-H4	6	2-7/32
3/8-16NC-H3	4	1-1/4	3/8-24NF-H3	6	1-1/4	1/4-20NC-H3	6	1
6-32NC-H3	6	11/16	7/16-14NC-H3	6	1-7/16	1/4-28NF-H3	6	1
6-40NF-H2	6	11/16	7/16-20NF-H3	6	1-7/16	5/16-18NC-H3	6	1-1/8
8-32NC-H3	6	3/4	1/2-13NC-H3	6	1-21/32			
8-36NF-H3	6	3/4	1/2-20NF-H3	6	1-21/32			
10-24NC-H3	6	7/8	9/16-12NC-H3	6	1-21/32			
10-32NF-H3	6	7/8	9/16-18NF-H3	6	1-21/32			
1/4-20NC-H3	6	1	5/8-11NC-H3	6	1-13/16			
1/4-28NF-H3	6	1	5/8-18NF-H3	6	1-13/16			
5/16-18NC-H3	6	1-1/8	3/4-10NC-H3	6	2			



*DIN351 Hand taps, 3pcs  
Material: Aolly tool steel*

SIZE	L	I	SIZE	L	I	SIZE	L	I
NO.1-64UNC	32	10	1-1/4-7UNC	132	56	9/16-18UNF	70	20
NO.2-56UNC	36	11	1-3/8-6UNC	150	63	5/8-18UNF	70	20
NO.3-48UNC	36	11	1-1/2-6UNC	150	63	3/4-16UNF	80	22
NO.4-40UNC	36	11	1-3/4-5UNC	160	70	7/8-14UNF	80	22
NO.5-40UNC	36	11	2-1/4-1/2UNC	190	80	11-14UNF	90	22
NO.6-32UNC	45	14	NO.0-80UNF	28	8	11-12UNF	90	22
NO.8-32UNC	45	14	NO.1-72UNF	32	10	1-1/8-12UNF	100	28
NO.10-24UNC	48	16	NO.2-64UNF	32	10	1-1/4-12UNF	100	28
NO.12-24UNC	50	18	NO.3-56UNF	32	10	1-3/8-12UNF	110	32
1/4-20UNC	56	22	NO.4-48UNF	36	11	1-1/2-12UNF	110	32
5/16-18UNC	63	25	NO.5-44UNF	40	12			
3/8-16UNC	70	28	NO.6-40UNF	40	12			
6/17-14UNC	75	30	NO.8-36UNF	40	12			
1/2-13UNC	80	32	NO.10-32UNF	45	14			
9/16-12UNC	80	32	NO.12-28UNF	50	16			
5/8-11UNC	90	36	1/4-28UNF	56	18			
3/4-10UNC	105	40	5/16-24UNF	56	18			
7/8-9UNC	110	45	3/8-24UNF	63	18			
11-8UNC	110	50	7/16-20UNF	63	18			
1-1/8-7UNC	132	56	1/2-20UNF	63	20			



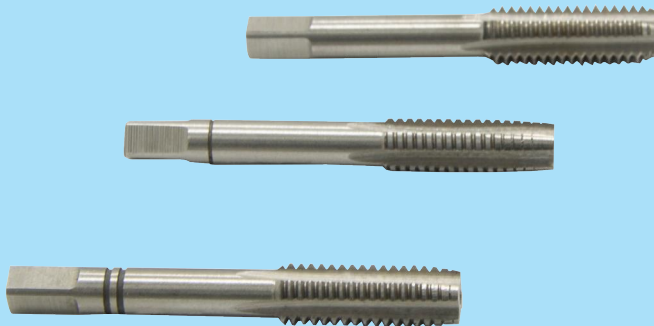
*DIN352 Millimeter taps, 3pcs  
Material: HSS or Aolly tool steel*

D	P	L	I	D	P	L	I	D	P	L	I
M1	0.25	32	5.5	M9	1.25	63	22	M60	5.5	200	75
M1.1	0.25	32	5.5	M10	1.5	70	24	M64	6	220	80
M1.2	0.25	32	5.5	M11	1.5	70	24	M68	6	220	80
M1.4	0.3	32	7	M12	1.75	75	29				
M1.6	0.35	32	8	M14	2	80	30				
M1.7	0.35	32	8	M16	2	80	32				
M1.8	0.35	32	8	M18	2.5	95	40				
M2	0.4	36	8	M20	2.5	95	40				
M2.2	0.45	36	9	M22	2.5	100	40				
M2.3	0.4	36	9	M24	3	110	50				
M2.5	0.45	40	9	M27	3	110	50				
M2.6	0.45	40	9	M30	3.5	125	56				
M3	0.5	40	11	M33	3.5	125	56				
M3.5	0.6	45	13	M36	4	150	63				
M4	0.7	45	13	M39	4	150	63				
M4.5	0.75	50	16	M42	4.5	160	70				
M5	0.8	50	16	M45	4.5	160	70				
M6	1	50	19	M48	5	180	75				
M7	1	50	19	M52	5	180	75				
M8	1.25	56	22	M56	5.5	200	75				



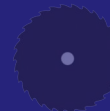
*Nut taps  
Ground threads  
Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
1/4-20NC-H3	5	1-5/8	9/16-12NC-H3	7-1/2	2-3/4	1/8NC-H4	11	4
1/4-28NF-H3	5	1-1/4	9/16-18NF-H3	7-1/2	2	1-12NF-H4	11	3-1/2
5/16-18NC-H3	5-1/2	1-13/16	5/8-11NC-H3	8	3	1-14NS-H4	11	3
5/16-24NF-H3	5-1/2	1-3/8	5/8-18NF-H3	8	2-1/4	1-1/8-7NC-H4	11-1/2	4-3/4
3/8-16NC-H3	6	2	11/16-11VN-H3	8-1/2	3	1-1/8-12NF-H4	11-1/2	3-1/2
3/8-24NF-H3	6	1-1/2	11/16-11VN-H3	8-1/2	2-1/4	1-1/4-7NC-H4	12	4-3/4
7/16-14NC-H3	6-1/2	2-3/8	3/4-10NC-H3	9	3-1/4	1-1/4-12NF-H4	12	3-1/2
7/16-20NF-H3	6-1/2	1-3/4	3/4-16NF-H3	9	2-1/2	1-3/8-6NC-H4	12-1/2	5-3/8
1/2-13NC-H3	7	2-1/2	7/8-9NC-H4	10	3-5/8	1-3/8-12NF-H4	12-1/2	4
1/2-20NF-H3	7	1-7/8	7/8-14NF-H4	10	2-3/4	1-1/2-6NC-H4	13	5-3/8
						1-1/2-12NF-H4	13	4



*DIN351 Hand taps, 3pcs  
Material: Alloy tool steel*

SIZE	L	I	SIZE	L	I	SIZE	L	I
1/16-60BSW	36	10	3/8-16BSW	70	24	1-1/8-7BSW	132	56
3/32-48BSW	36	10	7/16-14BSW	70	24	1-1/4-7BSW	132	56
1/8-40BSW	40	12	1/2-12BSW	75	29	1-3/8-6BSW	150	63
5/32-32BSW	45	14	9/16-12BSW	80	30	1-1/2-6BSW	150	63
3/16-24BSW	50	18	5/8-11BSW	80	32	1-5/8-5BSW	160	70
7/32-24BSW	50	18	3-4-10BSW	95	40	1-3/4-5BSW	160	70
1/4-20BSW	50	19	7/8-9BSW	100	40	1-7/8-4-1/2BSW	190	80
5/16-18BSW	56	22	1-8BSW	110	50	2-1/4-1/2BSW	190	80



*DIN353 Pipe taps, 2pcs*  
*Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
R1/8	63	18	R1-1/8	110	32	R2-3/4	160	40
R1/4	63	20	R1-1/4	125	32	R3	160	40
R3/8	70	20	R1-3/8	125	32	R3-1/4	180	45
R1/2	80	22	R1-1/2	140	32	R3-1/2	180	45
R5/8	90	25	R1-3/4	160	36	R3-3/4	180	45
R3/4	100	28	R2	160	36	R4	180	45
R7/8	100	28	R2-1/4	160	36			
R1	110	32	R2-1/4	160	36			



*DIN371 Spiral point taps*  
*Material: HSS or Alloy tool steel*

D	P	L	I	D	P	L	I	D	P	L	I
M1.4	0.3	40	7	M2.5	0.45	50	9	M7	1	90	19
M1.6	0.35	40	8	M2.6	0.45	50	9	M8	1.25	90	22
M1.7	0.35	40	8	M3	0.5	56	11	M9	1.25	90	22
M1.8	0.35	40	8	M3.5	0.6	56	13	M10	1.5	100	24
M2	0.4	45	8	M4	0.7	63	13				
M2.2	0.45	45	9	M5	0.8	70	16				
M2.3	0.4	45	9	M6	1	80	19				



*DIN371 Spiral flute taps*  
*Material: HSS or Alloy tool steel*

D	P	L	I
M1.4	0.3	40	7
M1.6	0.35	40	8
M1.7	0.35	40	8
M1.8	0.35	40	8
M2	0.4	45	8
M2.2	0.45	45	9
M2.3	0.4	45	9

D	P	L	I
M2.5	0.45	50	9
M2.6	0.45	50	9
M3	0.5	56	11
M3.5	0.6	56	13
M4	0.7	63	13
M5	0.8	70	16
M6	1	80	19

D	P	L	I
M7	1	90	19
M8	1.25	90	22
M9	1.25	90	22
M10	1.5	100	24

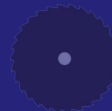


*DIN371 Machine taps*  
*Material: HSS*

D	P	L	I
M1.4	0.3	40	7
M1.6	0.35	40	8
M1.7	0.35	40	8
M1.8	0.35	40	8
M2	0.4	45	8
M2.2	0.45	45	9
M2.3	0.4	45	9

D	P	L	I
M2.5	0.45	50	9
M2.6	0.45	50	9
M3	0.5	56	11
M3.5	0.6	56	13
M4	0.7	63	13
M5	0.8	70	16
M6	1	80	19

D	P	L	I
M7	1	90	19
M8	1.25	90	22
M9	1.25	90	22
M10	1.5	100	24



*DIN371 Machine taps*  
Material: HSS

SIZE	L	I	SIZE	L	I	SIZE	L	I
NO.1-64UNC	40	8	5/16-18UNC	90	20	NO.10-32UNF	70	15
NO.2-56UNC	45	9	3/8-16UNC	100	22	NO.12-28UNF	80	16
NO.3-48UNC	50	9	NO.0-80UNF	40	8	1/4-28UNF	80	17
NO.4-40UNC	56	11	NO.1-72UNF	40	8	5/16-24UNF	90	20
NO.5-40UNC	56	11	NO.2-64UNF	45	9	3/8-24UNF	100	22
NO.6-32UNC	56	12	NO.3-56UNF	50	9			
NO.8-32UNC	63	13	NO.4-48UNF	56	11			
NO.10-24UNC	70	15	NO.5-44UNF	56	11			
NO.12-24UNC	80	16	NO.6-40UNF	56	12			
1/4-20UNC	80	17	NO.8-36UNF	63	13			



*DIN371 Spiral flute taps*  
Material: HSS

SIZE	L	I	SIZE	L	I	SIZE	L	I
NO.1-64UNC	40	8	NO.12-24UNC	80	16	NO.4-48UNF	56	11
NO.2-56UNC	45	9	1/4-20UNC	80	17	NO.5-44UNF	56	11
NO.3-48UNC	50	9	5/16-18UNC	90	20	NO.6-40UNF	56	12
NO.4-40UNC	56	11	3/8-16UNC	100	22	NO.8-36UNF	63	13
NO.5-40UNC	56	11	NO.0-80UNF	40	8	NO.10-32UNF	70	15
NO.6-32UNC	56	12	NO.1-72UNF	40	8	NO.12-28UNF	80	16
NO.8-32UNC	63	13	NO.2-64UNF	45	9	1/4-28UNF	80	17
NO.10-24UNC	70	15	NO.3-56UNF	50	9	5/16-24UNF	90	20
						3/8-24UNF	100	22





*DIN371 Spiral point taps*  
Material: HSS

SIZE	L	I
NO.1-64UNC	40	8
NO.2-56UNC	45	9
NO.3-48UNC	50	9
NO.4-40UNC	56	11
NO.5-40UNC	56	11
NO.6-32UNC	56	12
NO.8-32UNC	63	13
NO.10-24UNC	70	15
NO.12-24UNC	80	16
1/4-20UNC	80	17

SIZE	L	I
5/16-18UNC	90	20
3/8-16UNC	100	22
NO.0-80UNF	40	8
NO.1-72UNF	40	8
NO.2-64UNF	45	9
NO.3-56UNF	50	9
NO.4-48UNF	56	11
NO.5-44UNF	56	11
NO.6-40UNF	56	12
NO.8-36UNF	63	13

SIZE	L	I
NO.10-32UNF	70	15
NO.12-28UNF	80	16
1/4-28UNF	80	17
5/16-24UNF	90	20
3/8-24UNF	100	22

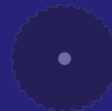


*DIN371 Spiral flute taps*  
Material: HSS

SIZE	L	I
W1/16-60	40	8
W3/32-48	50	9
W1/8-40	56	11
W5/32-32	63	13

SIZE	L	I
W3/16-24	70	15
W7/32-24	80	16
W1/4-20	80	17
W5/16-18	90	20

SIZE	L	I
W3/8-16	100	22
BSF3/16-32	70	15
BSF1/4-26	80	17
BSF5/16-22	90	20
BSF3/8-20	100	22



*DIN374 Spiral flute taps*  
*Material: HSS*

D	P	L	I
M3	0.35	56	10
M3.5	0.35	56	10
M4	0.35	63	10
M4	0.5	63	10
M5	0.5	70	12
M6	0.5	80	12
M6	0.75	80	14
M7	0.75	80	14
M8	0.5	80	12
M8	0.75	80	14
M8	1	90	16
M9	1	90	16
M10	0.5	90	14
M10	0.75	90	14
M10	1	90	20
M10	1.25	100	20
M11	1	90	16
M11	1.25	90	16
M12	0.75	100	18
M12	1	100	22
M12	1.25	100	22
M12	1.5	100	22

D	P	L	I
M13	1	100	22
M13	1.5	100	22
M14	0.75	100	22
M14	1	100	22
M14	1.25	100	22
M14	1.5	100	22
M16	1	100	22
M16	1.25	100	22
M16	1.5	100	22
M18	1	110	25
M18	1.5	110	25
M18	2	110	28
M20	1	125	25
M20	1.5	125	25
M20	2	140	28
M22	1	125	25
M22	1.5	125	25
M22	2	140	28
M24	1	125	20
M24	1.5	140	25
M24	2	140	28
M26	1.5	140	28

D	P	L	I
M27	2	140	28
M28	1.5	140	28
M30	1.5	150	28
M30	2	150	28
M32	1.5	150	28
M35	1.5	170	28
M36	1.5	170	28
M38	1.5	170	28
M40	1.5	170	28
M42	1.5	180	32
M45	1.5	180	32
M48	1.5	190	32
M50	1.5	190	32
M52	1.5	190	32

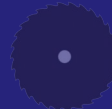


*DIN374 Spiral point taps*  
*Material: HSS*

D	P	L	I
M3	0.35	56	10
M3.5	0.35	56	10
M4	0.35	63	10
M4	0.5	63	10
M5	0.5	70	12
M6	0.5	80	12
M6	0.75	80	14
M7	0.75	80	14
M8	0.5	80	12
M8	0.75	80	14
M8	1	90	16
M9	1	90	16
M10	0.5	90	14
M10	0.75	90	14
M10	1	90	20
M10	1.25	100	20
M11	1	90	16
M11	1.25	90	16
M12	0.75	100	18
M12	1	100	22
M12	1.25	100	22
M12	1.5	100	22

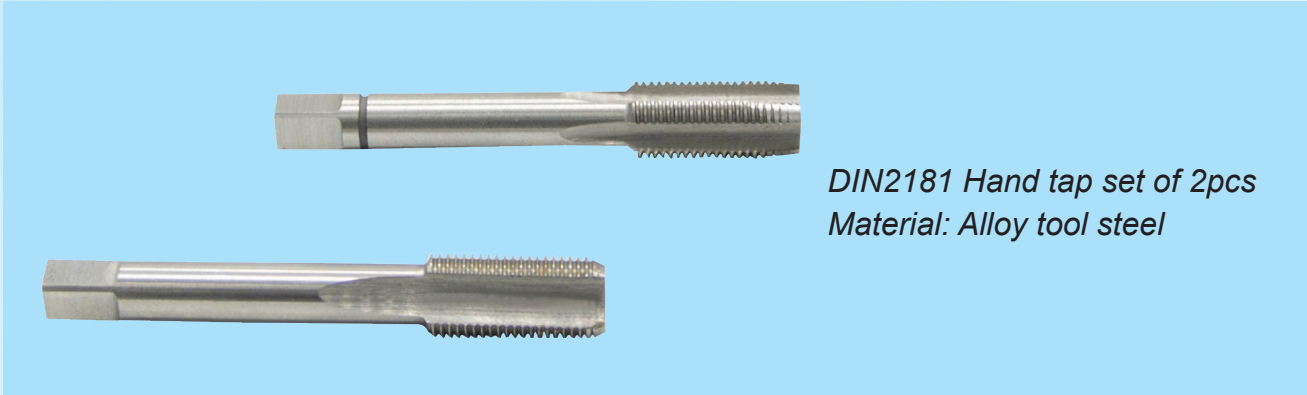
D	P	L	I
M13	1	100	22
M13	1.5	100	22
M14	0.75	100	22
M14	1	100	22
M14	1.25	100	22
M14	1.5	100	22
M16	1	100	22
M16	1.25	100	22
M16	1.5	100	22
M18	1	110	25
M18	1.5	110	25
M18	2	110	28
M20	1	125	25
M20	1.5	125	25
M20	2	140	28
M22	1	125	25
M22	1.5	125	25
M22	2	140	28
M24	1	125	20
M24	1.5	140	25
M24	2	140	28
M26	1.5	140	28

D	P	L	I
M27	2	140	28
M28	1.5	140	28
M30	1.5	150	28
M30	2	150	28
M32	1.5	150	28
M35	1.5	170	28
M36	1.5	170	28
M38	1.5	170	28
M40	1.5	170	28
M42	1.5	180	32
M45	1.5	180	32
M48	1.5	190	32
M50	1.5	190	32
M52	1.5	190	32



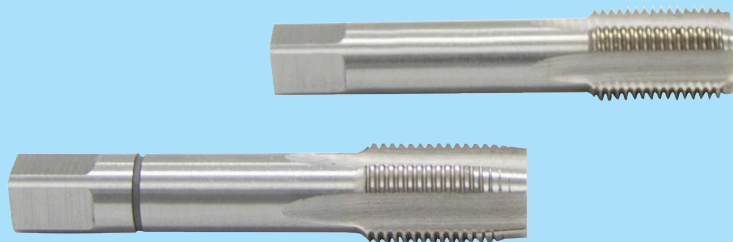
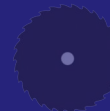
*DIN374 Spiral flute taps*  
*Material: HSS*

D	P	L	I	D	P	L	I	D	P	L	I
M3	0.35	56	10	M12	1.25	100	22	M24	1	125	20
M3.5	0.35	56	10	M12	1.5	100	22	M24	1.5	140	25
M4	0.35	63	10	M13	1	100	22	M24	2	140	28
M4	0.5	63	10	M13	1.5	100	22	M26	1.5	140	28
M5	0.5	70	12	M14	0.75	100	22	M27	2	140	28
M6	0.5	80	12	M14	1	100	22	M28	1.5	140	28
M6	0.75	80	14	M14	1.25	100	22	M30	1.5	150	28
M7	0.75	80	14	M14	1.5	100	22	M30	2	150	28
M8	0.5	80	12	M16	1	100	22	M32	1.5	150	28
M8	0.75	80	14	M16	1.25	100	22	M35	1.5	170	28
M8	1	90	16	M16	1.5	100	22	M36	1.5	170	28
M9	1	90	16	M18	1	110	25	M38	1.5	170	28
M10	0.5	90	14	M18	1.5	110	25	M40	1.5	170	28
M10	0.75	90	14	M18	2	110	28	M42	1.5	180	32
M10	1	90	20	M20	1	125	25	M45	1.5	180	32
M10	1.25	100	20	M20	1.5	125	25	M48	1.5	190	32
M11	1	90	16	M20	2	140	28	M50	1.5	190	32
M11	1.25	90	16	M22	1	125	25	M52	1.5	190	32
M12	0.75	100	18	M22	1.5	125	25				
M12	1	100	22	M22	2	140	28				



*DIN2181 Hand tap set of 2pcs  
Material: Alloy tool steel*

D	P	L	I	D	P	L	I	D	P	L	I
M3	0.35	40	9	M14	1	70	22	M24	1.5	90	22
M4	0.35	45	10	M14	1.25	70	22	M24	2	90	22
M4	0.5	45	10	M14	1.5	70	22	M25	1.5	90	22
M5	0.5	50	12	M15	1	70	22	M26	1.5	90	22
M6	0.5	50	14	M15	1.5	70	22	M26	2	90	22
M6	0.75	50	14	M16	1	70	22	M27	1.5	90	22
M7	0.75	50	14	M16	1.25	70	22	M27	2	90	22
M8	0.5	50	19	M16	1.5	70	22	M28	1.5	90	22
M8	0.75	50	19	M18	1	80	22	M28	2	90	22
M8	1	56	22	M18	1.25	80	22	M30	1	90	22
M9	1	63	20	M18	2	80	22	M30	1.5	90	22
M10	0.75	63	20	M18	1	80	22	M30	2	90	22
M10	1	63	20	M20	1	80	22	M32	1.5	100	25
M10	1.25	70	22	M20	1.25	80	22	M33	1.5	100	25
M11	1	63	22	M20	1.5	80	22	M33	2	100	25
M12	1	70	22	M20	2	80	22	M34	1.5	100	25
M12	1.25	70	22	M22	1	80	22	M35	1.5	100	25
M12	1.5	70	22	M22	1.5	80	22	M36	1.5	100	25
M13	1	70	22	M22	2	80	22				
M13	1.5	70	22	M24	1	90	22				



*DIN5157 Machine taps for pipe threads, 2pcs*  
*Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
G1/16-28	56	22	G11-11	100	25	G2-3/4-11	160	40
G1/8-28	63	20	G1-1/8-11	125	40	G3-11	160	40
G1/4-19	70	22	G1-1/4-11	125	40	G3-1/2-11	180	45
G3/8-19	70	22	G1-1/2-11	140	40	G4-11	190	45
G1/2-14	80	22	G1-3/4-11	140	40			
G5/8-14	80	22	G2-11	160	40			
G3/4-14	90	22	G2-1/4-11	160	40			
G7/8-14	90	22	G2-1/2-11	160	40			



*DIN5157 Machine taps for pipe threads*  
*Material: HSS*

SIZE	L	I	SIZE	L	I	SIZE	L	I
G1/16-28	90	22	G3/4-14	140	28	G1-3/4-11	200	40
G1/8-28	90	20	G7/8-14	150	28	G21-11	220	40
G1/4-19	100	22	G11-11	160	30			
G3/8-19	100	22	G1-1/8-11	170	30			
G1/2-14	125	25	G1-1/4-11	170	30			
G5/8-14	125	25	G1-1/2-11	190	32			



Round dies for metric ISO threads  
DIN223  
Material:HSS or Alloy tool steel

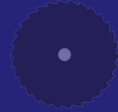
d	P	D	L
M1	0.2	16	5
M1	0.25	16	5
M1.2	0.2	16	5
M1.2	0.25	16	5
M1.4	0.2	16	5
M1.4	0.3	16	5
M1.6	0.2	16	5
M1.6	0.35	16	5
M1.8	0.2	16	5
M1.8	0.35	16	5
M2	0.25	16	5
M2	0.4	16	5
M2.2	0.25	16	5
M2.2	0.45	16	5
M2.5	0.35	16	5
M2.5	0.45	16	5
M3	0.35	20	5
M3	0.5	20	5
M3.5	0.35	20	5
M3.5	0.6	20	5
M4	0.5	20	5
M4	0.7	20	5
M4.5	0.5	20	5
M4.5	0.75	20	7
M5	0.5	20	5
M5	0.8	20	7
M5.5	0.5	20	5

d	P	D	L
M6	0.75	20	7
M6	1	20	7
M7	0.75	25	9
M7	1	25	9
M8	0.5	25	7
M8	0.75	25	9
M8	1	25	9
M8	1.25	25	9
M9	1	25	9
M9	1.25	25	9
M10	0.5	30	8
M10	0.75	30	11
M10	1	30	11
M10	1.25	30	11
M10	1.5	30	11
M12	0.5	38	10
M12	0.75	38	10
M12	1	38	10
M12	1.25	38	10
M12	1.5	38	10
M12	1.75	38	14
M14	0.5	38	10
M14	0.75	38	10
M14	1	38	10
M14	1.25	38	10
M14	1.5	38	10
M14	2	38	14

d	P	D	L
M15	1.5	38	10
M16	0.5	45	10
M16	0.75	45	10
M16	1	45	14
M16	1.25	45	14
M16	1.5	45	14
M16	2	45	18
M17	1.5	45	14
M18	0.5	45	10
M18	0.75	45	10
M18	1	45	14
M18	1.25	45	14
M18	1.5	45	14
M18	2	45	14
M18	2.5	45	18
M20	0.5	45	10
M20	0.75	45	10
M20	1	45	14
M20	1.25	45	14
M20	1.5	45	14
M20	2	45	14
M22	0.5	55	12
M22	0.75	55	12
M22	1	55	16
M22	1.5	55	16
M22	2	55	16
M22	2.5	55	22



# Taps & Dies



## Taps & Dies

d	P	D	L
M24	0.5	55	12
M24	0.75	55	12
M24	1	55	16
M24	1.5	55	16
M24	2	55	16
M24	3	55	22
M25	1.5	55	16
M25	2	55	16
M27	0.5	65	14
M27	0.75	65	14
M27	1	65	18
M27	1.5	65	18
M27	2	65	18
M27	3	65	25
M28	1.5	65	18
M28	2	65	18
M30	0.5	65	14
M30	0.75	65	14
M30	1	65	18
M30	1.5	65	18
M30	2	65	18
M30	3	65	25
M30	3.5	65	25
M32	1.5	65	18
M32	2	65	18
M33	1	65	14
M33	1.5	65	18
M33	2	65	18
M33	3.5	65	25

d	P	D	L
M35	1.5	65	18
M36	1	65	14
M36	1.5	65	18
M36	2	65	18
M36	3	65	25
M36	4	65	25
M39	1	75	16
M39	1.5	75	20
M39	2	75	20
M39	3	75	30
M39	4	75	30
M40	1	75	16
M40	1.5	75	20
M40	2	75	20
M40	3	75	30
M42	1	75	16
M42	1.5	75	20
M42	2	75	20
M42	3	75	30
M42	4.5	75	30
M45	1	90	18
M45	1.5	90	22
M45	2	90	22
M45	3	90	36
M45	4.5	90	36
M48	1	90	18
M48	1.5	90	22
M48	2	90	22
M48	3	90	36

d	P	D	L
M48	4	90	36
M48	5	90	36
M50	1	90	18
M50	1.5	90	22
M50	2	90	22
M50	3	90	36
M50	4	90	36
M52	1	90	18
M52	1.5	90	22
M52	2	90	22
M52	3	90	36
M52	4	90	36
M52	5	90	36
M55	1.5	105	22
M55	2	105	22
M55	3	105	36
M55	4	105	36
M56	1.5	105	22
M56	2	105	22
M56	3	105	36
M56	4	105	36
M56	5.5	105	36
M60	5.5	105	36
M64	6	120	36
M68	6	120	36





*Round dies for piper threads  
DIN5158  
Material:HSS or Alloy tool steel*

d	D	L
G1/16	25	9
G1/8	30	11
G1/4	38	10
G3/8	45	14
G1/2	45	14
G5/8	55	16

d	D	L
G3/4	55	16
G7/8	65	18
G1	65	18
G1-1/8	75	20
G1-1/4	75	20
G1-1/2	90	22

d	D	L
G1-3/4	105	22
G2	105	22
G2-1/4	120	22

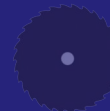


*Round dies for 55° cone piper threads  
DIN5159  
Material:HSS or Alloy tool steel*

d	D	L
R1/16	30	11
R1/8	30	11
R1/4	38	14
R3/8	45	18

d	D	L
R1/2	55	22
R3/4	55	22
R1	65	25
R11/4	75	30

d	D	L
R11/2	90	36
R2	105	36



*Adjustable round dies  
ANSI B94.9  
Material: HSS or Alloy tool steel*

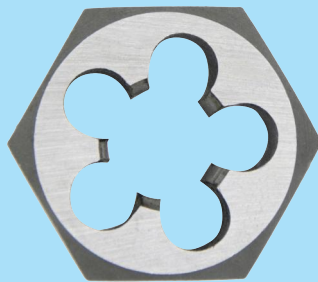
d	P	D	d	P	D	d	P	D
M1.6	0.35	13/16	M5	0.9	13/16	M12	1.25	1
M1.6	0.35	1	M5	0.9	1	M12	1.25	1-1/2
M1.8	0.35	13/16	M6	0.5	13/16	M12	1.5	1-1/2
M1.8	0.35	1	M6	0.5	1	M12	1.75	1-1/2
M2	0.4	13/16	M6	0.75	13/16	M14	1	1-1/2
M2	0.4	1	M6	0.75	1	M14	1.25	1-1/2
M2.2	0.45	13/16	M6	1	13/16	M14	1.5	1-1/2
M2.2	0.45	1	M6	1	1	M14	2	1-1/2
M2.3	0.4	13/16	M6.3	1	1	M15	1.5	1-1/2
M2.3	0.4	1	M7	0.75	1	M15	1.5	2
M2.5	0.45	13/16	M7	1	1	M16	1	1-1/2
M2.5	0.45	1	M8	0.75	1	M16	1	2
M2.6	0.45	13/16	M8	1	1	M16	1.5	1-1/2
M2.6	0.45	1	M8	1.25	1	M16	1.5	2
M3	0.5	13/16	M9	1	1	M16	2	1-1/2
M3	0.5	1	M9	1	1-1/2	M16	2	2
M3	0.6	13/16	M9	1.25	1	M17	1.5	1-1/2
M3	0.6	1	M9	1.25	1-1/2	M17	1.5	2
M3.5	0.6	13/16	M10	0.75	1	M18	1.5	1-1/2
M3.5	0.6	1	M10	0.75	1-1/2	M18	1.5	2
M4	0.5	13/16	M10	1	1	M18	2	1-1/2
M4	0.5	1	M10	1	1-1/2	M18	2	2
M4	0.7	13/16	M10	1.25	1	M18	2.5	1-1/2
M4	0.7	1	M10	1.25	1-1/2	M18	2.5	2
M4.5	0.5	13/16	M10	1.5	1	M20	1.5	1-1/2
M4.5	0.5	1	M10	1.5	1-1/2	M20	1.5	2
M4.5	0.7	13/16	M11	1	1	M20	2	1-1/2
M4.5	0.7	1	M11	1	1-1/2	M20	2	2
M5	0.5	13/16	M11	1.5	1	M22	2.5	2
M5	0.5	1	M11	1.5	1-1/2	M24	1.5	2
M5	0.8	13/16	M12	1	1	M24	1.5	2-1/2
M5	0.8	1	M12	1	1-1/2	M24	2	2-1/2



d	P	D
M24	2	2-1/2
M24	3	2-1/2
M27	2	2-1/2
M27	3	2-1/2
M28	2	2-1/2
M30	1.5	2-1/2

d	P	D
M30	2	2-1/2
M30	3	2-1/2
M30	3.5	2-1/2
M33	3	2-1/2
M33	3.5	2-1/2
M36	3	2-1/2

d	P	D
M36	4	3
M39	3	3
M39	4	3

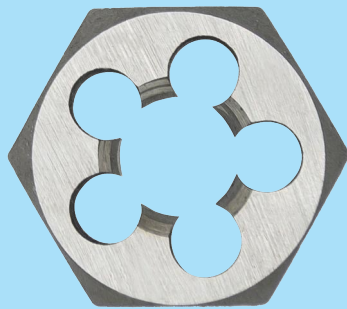
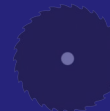


*Hexagonal die-nuts  
DIN382  
Material:HSS or Alloy tool steel*

d	P	D	L
M3	0.5	19	5
M3.5	0.6	19	5
M4	0.7	19	5
M4.5	0.75	19	7
M5	0.8	19	7
M6	1	19	7
M7	1	22	9
M8	1.25	22	9
M9	1.25	22	9
M10	1.5	27	11
M11	1.5	27	11
M12	1.75	36	14
M14	2	36	14
M16	2	41	18

d	P	D	L
M18	2.5	41	18
M20	2.5	41	18
M22	2.5	50	22
M24	3	50	22
M27	3	60	25
M30	3.5	60	25
M33	3.5	60	25
M36	4	60	25
M39	4	70	30
M42	4.5	70	30
M45	4.5	85	36
M48	5	85	36
M52	5	85	36
M55	1.5	105	22

d	P	D	L
M55	2	105	22
M55	3	105	36
M55	4	105	36
M56	1.5	105	22
M56	2	105	22
M56	3	105	36
M56	4	105	36
M56	5.5	105	36
M60	5.5	105	36
M64	6	120	36
M68	6	120	36



*Hexagonal piper die-nuts  
Material: HSS or Alloy tool steel*

SIZE	NO. of teeth	Thread diameter	D	L
G 1/8	28	9.73	27	11
G 1/4	19	13.16	36	10
G 3/8	19	16.66	41	14
G 1/2	14	20.96	41	14
G 5/8	14	22.91	50	16
G 3/4	14	26.44	60	18
G 7/8	14	30.2	60	18
G 1	11	33.25	60	18

SIZE	NO. of teeth	Thread diameter	D	L
G 1-1/8	11	37.9	70	20
G 1-1/4	11	41.91	70	20
G 1-3/8	11	44.33	85	22
G 1-1/2	11	47.8	85	22
G 1-3/4	11	53.75	100	22
G 2	11	59.61	100	22



*Handle for dies  
material: Zinc alloy*

SIZE
20x7mm
25x9mm

SIZE
30x11mm
38x14mm

SIZE
45x18mm
55x22mm
65x25mm



*Handle for taps  
material: Zinc alloy*

SIZE
M1-8
M1-10

SIZE
M4-12
M5-20

SIZE
M9-27
M13-32



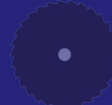
20pcs Metric Tap & Die Set (plastic box)  
 9 taps: M3x0.5, M4x0.7, M5x0.8, M6x1, M7x1, M8x1.25, M9x1.25, M10x1.5, M12x1.75  
 9 dies: M3x0.5, M4x0.7, M5x0.8, M6x1, M7x1, M8x1.25, M9x1.25, M10x1.5, M12x1.75  
 (round die or hexagon die)  
 1 die wrench O/D 25mm  
 1 tap wrench M3-M12



24pcs Metric Tap & Die Set (blow case & metal box)  
 11 taps: 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 1/8NPT27  
 11 dies: 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20, 1/8NPT27  
 (round die or hexagon die)  
 1 die wrench O/D 1"  
 1 tap wrench 1/16-1/2



32pcs Metric Tap & Die Set (metal box)  
 21 taps: M3x0.5, M4x0.7, M5x0.8, M6x1, M8x1.25, M10x1.5, M12x1.75 taper, plug, bottom  
 7 dies: M3x0.5, M4x0.7, M5x0.8, M6x1, M8x1.25, M10x1.5, M12x1.75  
 1 tap wrench M3-M12  
 1 die wrench O/D 25mm  
 1 screwdriver  
 1 screw pitch gauge



40pcs Metric Tap & Die Set (plastic box & blow case & metal box)

17 taps: M3x0.5, M3x0.6, M4x0.7, M4x0.75, M5x0.8, M5x0.9, M6x0.75, M6x1.0, M7x0.75, M7x1.0, M8x1.0, M8x1.25, M10x1.25, M10x1.5, M12x1.5, M12x1.75, 1/8NPT27

17 dies: M3x0.5, M3x0.6, M4x0.7, M4x0.75, M5x0.8, M5x0.9, M6x0.75, M6x1.0, M7x0.75, M7x1.0, M8x1.0, M8x1.25, M10x1.25, M10x1.5, M12x1.5, M12x1.75, 1/8NPT27

1 tap wrench: M3-M12      1 T tap wrench: M3-M6  
1 die wrench O/D 25mm      1 screwdriver  
1 screw pitch gauge



45pcs Metric Tap & Die Set (blow case & metal box)

20 taps: M6x0.75, M6x1.0, M8x1.0, M8x1.25, M10x1.25, M10x1.5, M12x1.5, M12x1.75, M14x1.5, M14x2.0, M16x1.5, M16x2.0, M18x1.5, M18x2.5, M20x1.5, M20x2.5, M22x1.5, M22x2.5, M24x1.5, M24x3.0,

20 dies: M6x0.75, M6x1.0, M8x1.0, M8x1.25, M10x1.25, M10x1.5, M12x1.5, M12x1.75, M14x1.5, M14x2.0, M16x1.5, M16x2.0, M18x1.5, M18x2.5, M20x1.5, M20x2.5, M22x1.5, M22x2.5, M24x1.5, M24x3.0,

1 tap wrench: M8-M25      1 T tap wrench: M3-M6  
1 die wrench O/D 50mm  
1 adapter for die wrench: 38mm O/D  
1 screwdriver

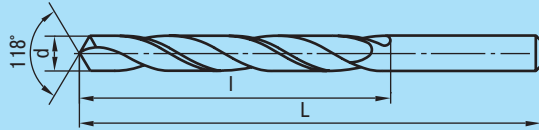


60pcs Metric Tap & Die Set (blow case & metal box)

27 taps: M3x0.5, M4x0.7, M5x0.8, M6x1.0, 7x1.0, M8x1.25, M9x1.25, M10x1.0, M10x1.5, M12x1.75, 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8NPT27

27 dies: M3x0.5, M4x0.7, M5x0.8, M6x1.0, 7x1.0, M8x1.25, M9x1.25, M10x1.0, M10x1.5, M12x1.75, 4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8NPT27

1 tap wrench: M4-M12 (3/16-1/2")  
1 T tap wrench: 1/16-1/4"  
1 die wrench O/D 25mm (1")      1 screwdriver  
1 metric screw pitch gauge      1 inch screw pitch gauge



Twist drills with straight shank

DIN338

Material: HSS

Manufacturing process: Roll forged, half ground, fully ground

Point angle: 118°, 135°

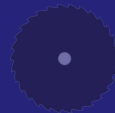
Finish: black oxide, bright, TiN coating

Diameter: 0.2-20.0mm

D	l	L	D	l	L	D	l	L
0.20	2.5	19	0.85	10.0	30	2.30	27.0	53
0.21	2.5	19	0.90	11.0	32	2.35	27.0	53
0.22	2.5	19	0.95	11.0	32	2.40	30.0	57
0.23	2.5	19	1.00	12.0	34	2.45	30.0	57
0.24	2.5	19	1.05	12.0	34	2.50	30.0	57
0.25	3.0	19	1.10	14.0	36	2.55	30.0	57
0.26	3.0	19	1.15	14.0	36	2.60	30.0	57
0.27	3.0	19	1.20	16.0	38	2.65	30.0	57
0.28	3.0	19	1.25	16.0	38	2.70	33.0	61
0.29	3.0	19	1.30	16.0	38	2.75	33.0	61
0.30	3.0	19	1.35	18.0	40	2.80	33.0	61
0.32	4.0	19	1.40	18.0	40	2.85	33.0	61
0.34	4.0	19	1.45	18.0	40	2.90	33.0	61
0.35	4.0	19	1.50	18.0	40	2.95	33.0	61
0.36	4.0	19	1.55	20.0	43	3.00	33.0	61
0.38	4.0	19	1.60	20.0	43	3.10	36.0	65
0.40	5.0	20	1.65	20.0	43	3.20	36.0	65
0.42	5.0	20	1.70	20.0	43	3.30	36.0	65
0.44	5.0	20	1.75	22.0	46	3.40	39.0	70
0.45	5.0	20	1.80	22.0	46	3.50	39.0	70
0.46	5.0	20	1.85	22.0	46	3.60	39.0	70
0.48	5.0	20	1.90	22.0	46	3.70	39.0	70
0.50	6.0	22	1.95	24.0	49	3.80	43.0	75
0.55	7.0	24	2.00	24.0	49	3.90	43.0	75
0.60	7.0	24	2.05	24.0	49	4.00	43.0	75
0.65	8.0	26	2.10	24.0	49	4.10	43.0	75
0.70	9.0	28	2.15	27.0	53	4.20	43.0	75
0.75	9.0	28	2.20	27.0	53	4.30	47.0	80
0.80	10.0	30	2.25	27.0	53	4.40	47.0	80



# Drills



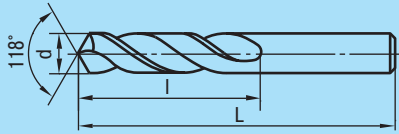
Drills

D	I	L
4.50	47.0	80
4.60	47.0	80
4.70	47.0	80
4.80	52.0	86
4.90	52.0	86
5.00	52.0	86
5.10	52.0	86
5.20	52.0	86
5.30	52.0	86
5.40	57.0	93
5.50	57.0	93
5.60	57.0	93
5.70	57.0	93
5.80	57.0	93
5.90	57.0	93
6.00	57.0	93
6.10	63.0	101
6.20	63.0	101
6.30	63.0	101
6.40	63.0	101
6.50	63.0	101
6.60	63.0	101
6.70	63.0	101
6.75	69.0	109
6.80	69.0	109
6.90	69.0	109
7.00	69.0	109
7.10	69.0	109
7.20	69.0	109
7.30	69.0	109
7.40	69.0	109
7.50	69.0	109
7.60	75.0	117
7.70	75.0	117
7.80	75.0	117
7.90	75.0	117

D	I	L
8.00	75.0	117
8.10	75.0	117
8.20	75.0	117
8.30	75.0	117
8.40	75.0	117
8.50	75.0	117
8.60	81.0	125
8.70	81.0	125
8.80	81.0	125
8.90	81.0	125
9.00	81.0	125
9.10	81.0	125
9.20	81.0	125
9.30	81.0	125
9.40	81.0	125
9.50	81.0	125
9.60	87.0	133
9.70	87.0	133
9.80	87.0	133
9.90	87.0	133
10.00	87.0	133
10.10	87.0	133
10.20	87.0	133
10.30	87.0	133
10.40	87.0	133
10.50	87.0	133
10.60	87.0	133
10.70	94.0	142
10.80	94.0	142
10.90	94.0	142
11.00	94.0	142
11.10	94.0	142
11.20	94.0	142
11.30	94.0	142
11.40	94.0	142
11.50	94.0	142

D	I	L
11.60	94.0	142
11.70	94.0	142
11.80	94.0	142
11.90	101.0	151
12.00	101.0	151
12.10	101.0	151
12.20	101.0	151
12.30	101.0	151
12.40	101.0	151
12.50	101.0	151
12.60	101.0	151
12.70	101.0	151
12.80	101.0	151
12.90	101.0	151
13.00	101.0	151
13.20	101.0	151
13.50	108.0	160
13.80	108.0	160
14.00	108.0	160
14.20	114.0	169
14.50	114.0	169
14.80	114.0	169
15.00	114.0	169
15.50	120.0	178
16.00	120.0	178
16.20	125.0	184
16.50	125.0	184
17.00	125.0	184
17.50	130.0	191
18.00	130.0	191
18.50	135.0	198
19.00	135.0	198
19.50	140.0	205
20.00	140.0	205





*Twist drills with straight shank ,short series  
DIN1897*

*Material:HSS*

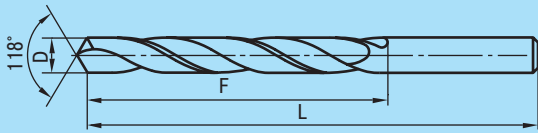
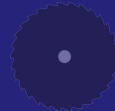
*Manufacturing process:Half ground, fully ground*

*Point angle:118°,135°*

*Finish:black oxide, bright,TiN coating*

*Diameter:1.0-13.0mm*

D	I	L	D	I	L	D	I	L
1.00	6	26	2.65	14	43	6.80	34	74
1.05	6	26	2.70	16	46	6.90	34	74
1.10	7	28	2.75	16	46	7.00	34	74
1.15	7	28	2.80	16	46	7.20	34	74
1.20	8	30	2.85	16	46	7.50	37	79
1.25	8	30	2.90	16	46	8.00	37	79
1.30	8	30	2.95	16	46	8.10	37	79
1.35	9	32	3.00	16	46	8.40	37	79
1.40	9	32	3.10	18	49	8.50	37	79
1.45	9	32	3.20	18	49	8.70	40	84
1.50	9	32	3.30	18	49	9.00	40	84
1.55	10	34	3.40	20	52	9.10	40	84
1.60	10	34	3.50	20	52	9.20	40	84
1.65	10	34	3.60	20	52	9.30	40	84
1.70	10	34	3.70	20	52	9.50	40	84
1.75	11	36	4.00	22	55	9.70	43	89
1.80	11	36	4.10	22	55	9.80	43	89
1.85	11	36	4.20	22	55	10.00	43	89
1.90	11	36	4.50	24	58	10.20	43	89
1.95	12	38	4.70	24	58	10.50	43	89
2.00	12	38	4.80	26	62	10.80	47	95
2.05	12	38	4.90	26	62	11.00	47	95
2.10	12	38	5.00	26	62	11.20	47	95
2.15	12	40	5.10	26	62	11.50	47	95
2.20	12	40	5.50	28	66	11.80	47	95
2.25	12	40	5.70	28	66	12.00	51	102
2.30	13	40	5.80	28	66	12.20	51	102
2.40	14	43	6.00	28	66	12.50	51	102
2.45	14	43	6.20	31	70	12.60	51	102
2.50	14	43	6.40	31	70	12.70	51	102
2.55	14	43	6.50	31	70	12.80	51	102
2.60	14	43	6.60	31	70	13.00	51	102



*Twist drills with straight shank  
ANSI B94.11M 1979*

*Material:HSS*

*Manufacturing process:Roll forged,  
half ground, fully ground*

*Point angle:118° 135°*

*Finish:black oxide, bright, TiN coating*

*Diameter:1/64-11/16inch*

D		I		L	
Inch	mm	Inch	mm	Inch	mm
	1.702	1	25	2	51
	1.778	1	25	2	51
	1.859	1	25	2	51
	1.930	1	25	2	51
5/64	1.984	1	25	2	51
	1.994	1	25	2	51
	2.057	1 1/8	29	2 1/8	54
	2.083	1 1/8	29	2 1/8	54
	2.184	1 1/8	29	2 1/8	54
	2.261	1 1/4	32	2 1/4	57
	2.375	1 1/4	32	2 1/4	57
3/32	2.383	1 1/4	32	2 1/4	57
	2.438	1 3/8	35	2 3/8	60
	2.489	1 3/8	35	2 3/8	60
	2.527	1 3/8	35	2 3/8	60
	2.578	1 7/16	37	2 1/2	64
	2.642	1 7/16	37	2 1/2	64
	2.705	1 7/16	37	2 1/2	64
7/64	2.779	1 1/2	38	2 5/8	67
	2.794	1 1/2	38	2 5/8	67
	2.819	1 1/2	38	2 5/8	67
	2.870	1 1/2	38	2 5/8	67
	2.946	1 5/8	41	2 3/4	70
	3.048	1 5/8	41	2 3/4	70
1/8	3.175	1 5/8	41	2 3/4	70
	3.264	1 5/8	41	2 3/4	70
	3.454	1 3/4	44	2 7/8	73
	3.569	1 3/4	44	2 7/8	73

D		I		L	
Inch	mm	Inch	mm	Inch	mm
9/64	3.571	1 3/4	44	2 7/8	73
	3.658	1 7/8	48	3	76
	3.734	1 7/8	48	3	76
	3.797	1 7/8	48	3	76
	3.861	2	51	3 1/8	79
	3.912	2	51	3 1/8	79
5/32	3.967	2	51	3 1/8	79
	3.988	2	51	3 1/8	79
	4.039	2 1/8	54	3 1/4	83
	4.089	2 1/8	54	3 1/4	83
	4.216	2 1/8	54	3 1/4	83
	4.305	2 1/8	54	3 1/4	83
11/64	4.366	2 1/8	54	3 1/4	83
	4.394	2 3/16	56	3 3/8	86
	4.496	2 3/16	56	3 3/8	86
	4.572	2 3/16	56	3 3/8	86
	4.623	2 3/16	56	3 3/8	86
	4.700	2 5/16	59	3 1/2	89
3/16	4.762	2 5/16	59	3 1/2	89
	4.800	2 5/16	59	3 1/2	89
	4.851	2 5/16	59	3 1/2	89
	4.915	2 7/16	62	3 5/8	92
	4.978	2 7/16	62	3 5/8	92
	5.054	2 7/16	62	3 5/8	92
	5.105	2 7/16	62	3 5/8	92
13/64	5.159	2 7/16	62	3 5/8	92
	5.182	2 1/2	64	3 3/4	95
	5.220	2 1/2	64	3 3/4	95
	5.309	2 1/2	64	3 3/4	95



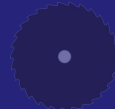
# Drills



	D	I	L		
	5.410	2 1/2	64	3 3/4	95
7/32	5.558	2 1/2	64	3 3/4	95
	5.613	2 5/8	67	3 7/8	98
	5.791	2 5/8	67	3 7/8	98
	5.944	2 5/8	67	3 7/8	98
15/64	5.954	2 5/8	67	3 7/8	98
	6.045	2 3/4	70	4	102
	6.147	2 3/4	70	4	102
	6.248	2 3/4	70	4	102
1/4	6.350	2 3/4	70	4	102
	6.528	2 7/8	73	4 1/8	105
	6.629	2 7/8	73	4 1/8	105
17/64	6.746	2 7/8	73	4 1/8	105
	6.756	2 7/8	73	4 1/8	105
	6.909	2 7/8	73	4 1/8	105
	7.036	2 7/8	73	4 1/8	105
	7.137	2 15/16	75	4 1/4	108
9/32	7.142	2 15/16	75	4 1/4	108
	7.366	2 15/16	75	4 1/4	108
	7.493	3 1/16	78	4 3/8	111
19/64	7.541	3 1/16	78	4 3/8	111
	7.671	3 1/16	78	4 3/8	111
5/16	7.938	3 3/16	81	4 1/2	114
	8.026	3 3/16	81	4 1/2	114
	8.204	3 5/16	84	4 5/8	117
21/64	8.334	3 5/16	84	4 5/8	117
	8.433	3 7/16	87	4 3/4	121
	8.611	3 7/16	87	4 3/4	121
11/32	8.733	3 7/16	87	4 3/4	121
	8.839	3 1/2	89	4 7/8	124

	D	I	L		
	9.093	3 1/2	89	4 7/8	124
23/64	9.129	3 1/2	89	4 7/8	124
	9.347	3 5/8	92	5	127
3/8	9.525	3 5/8	92	5	127
	9.576	3 5/8	92	5	127
	9.804	3 3/4	95	5 1/8	130
25/64	9.921	3 3/4	95	5 1/8	130
	10.084	3 3/4	95	5 1/8	130
	10.262	3 7/8	98	5 1/4	133
13/32	10.317	3 7/8	98	5 1/4	133
	10.490	3 7/8	98	5 1/4	133
27/64	10.716	3 15/16	100	5 3/8	137
7/16	11.112	4 1/16	103	5 1/2	140
29/64	11.509	4 3/16	106	5 5/8	143
15/32	11.908	4 5/16	110	5 3/4	146
31/64	12.304	4 3/8	111	5 7/8	149
1/2	12.700	4 1/2	114	6	152
33/64	13.096	4 13/16	122	6 5/8	168
17/32	13.492	4 13/16	122	6 5/8	168
35/64	13.891	4 13/16	122	6 5/8	168
9/16	14.288	4 13/16	122	6 5/8	168
37/64	14.684	4 13/16	122	6 5/8	168
19/32	15.083	5 3/16	132	7 1/8	181
39/64	15.479	5 3/16	132	7 1/8	181
5/8	15.875	5 3/16	132	7 1/8	181
41/64	16.271	5 3/16	132	7 1/8	181
21/32	16.667	5 3/16	132	7 1/8	181
43/64	17.066	5 5/8	143	7 5/8	194
11/16	17.462	5 5/8	143	7 5/8	194

Drills



*Twist drills with straight shank ,long series  
DIN340*

*Material:HSS*

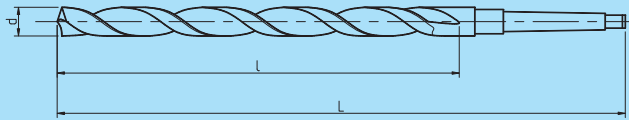
*Manufacturing process:Roll forged, half ground, fully ground, milled*

*Point angle:118°,135°*

*Finish:black oxide, bright,TiN coating*

*Diameter:1.0-31.0mm*

D	I	L	D	I	L	D	I	L
1.00	33	56	4.80	87	132	13.20	134	205
1.10	37	60	4.90	87	132	13.50	140	214
1.20	41	65	5.00	87	132	13.80	140	214
1.30	41	65	5.20	87	132	14.00	140	214
1.40	45	70	5.50	91	139	14.50	144	220
1.50	45	70	5.60	91	139	15.00	144	220
1.60	50	76	5.70	91	139	15.50	149	227
1.70	50	76	5.80	91	139	16.00	149	227
1.80	53	80	6.00	91	139	16.50	154	235
1.90	53	80	6.20	97	148	17.00	154	235
2.00	56	85	6.40	97	148	17.50	158	241
2.10	56	85	6.50	97	148	18.00	158	241
2.20	59	90	6.80	102	156	18.50	162	247
2.30	59	90	7.00	102	156	19.00	162	247
2.40	62	95	7.20	102	156	19.50	166	254
2.50	62	95	7.50	102	156	20.00	166	254
2.60	62	95	7.80	109	165	20.50	171	261
2.70	66	100	8.00	109	165	21.00	171	261
2.80	66	100	8.20	109	165	21.50	176	268
2.90	66	100	8.50	109	165	22.00	176	268
3.00	66	100	8.80	115	175	22.50	180	275
3.10	69	106	9.00	115	175	23.00	180	275
3.20	69	106	9.20	115	175	23.50	180	275
3.30	69	106	9.50	115	175	24.00	185	282
3.40	73	112	9.80	121	184	24.50	185	282
3.50	73	112	10.00	121	184	25.00	185	282
3.60	73	112	10.20	121	184	25.50	190	290
3.70	73	112	10.50	121	184	26.00	190	290
3.80	78	119	10.80	128	195	26.50	190	290
3.90	78	119	11.00	128	195	27.00	195	298
4.00	78	119	11.20	128	195	28.00	195	298
4.10	78	119	11.50	128	195	28.50	201	307
4.20	78	119	11.80	128	195	29.00	201	307
4.30	82	126	12.00	134	205	29.50	201	307
4.40	82	126	12.20	134	205	30.00	201	307
4.50	82	126	12.50	134	205	30.50	307	316
4.60	82	126	12.80	134	205	31.00	307	316
4.70	82	126	13.00	134	205			



*Twist drill with taper shank*

*DIN345*

*Material:HSS*

*Manufacturing process:Fully ground, milled*

*Point angle:118°,135°*

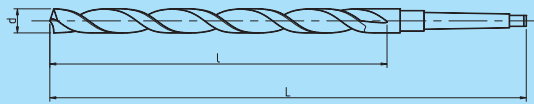
*Finish:black oxide, bright, TiN coating*

*Diameter:5.0-82.0mm*

d	l	L	KM/MC
5.00	52	133	1
5.50	57	138	1
6.00	57	138	1
6.50	53	144	1
6.80	69	150	1
7.00	69	150	1
7.50	69	150	1
8.00	75	156	1
8.50	75	156	1
8.80	75	156	1
9.00	81	162	1
9.50	81	162	1
10.00	87	168	1
10.20	87	168	1
10.50	87	168	1
11.00	94	175	1
11.50	94	175	1
12.00	101	182	1
12.20	101	182	1
12.50	101	182	1
12.80	101	182	1
13.00	101	182	1
13.50	108	189	1
13.80	108	189	1
14.00	108	189	1
14.25	114	212	2
14.50	114	212	2
14.75	114	212	2
15.00	114	212	2
15.25	120	218	2
15.50	120	218	2
15.75	120	218	2
16.00	120	218	2
16.25	125	223	2
16.50	125	223	2
16.75	125	223	2
17.00	125	223	2
17.25	130	228	2
17.50	130	228	2
18.00	130	228	2
18.50	135	233	2
19.00	135	233	2

d	l	L	KM/MC
19.50	140	238	2
20.00	140	238	2
20.50	145	243	2
21.00	145	243	2
21.50	150	248	2
22.00	150	248	2
22.50	155	253	2
23.00	155	253	2
23.50	155	276	3
24.00	160	281	3
24.50	160	281	3
25.00	160	281	3
25.50	165	286	3
26.00	165	286	3
26.50	165	286	3
27.00	170	291	3
27.50	170	291	3
28.00	170	291	3
28.50	175	296	3
29.00	175	296	3
29.50	175	296	3
30.00	175	296	3
30.50	180	301	3
31.00	180	301	3
31.50	180	301	3
32.00	185	334	4
32.50	185	334	4
33.00	185	334	4
33.50	185	334	4
34.00	190	339	4
34.50	190	339	4
35.00	190	339	4
35.50	190	339	4
36.00	195	344	4
36.50	195	344	4
37.00	195	344	4
37.50	195	344	4
38.00	200	349	4
39.00	200	349	4
40.00	200	349	4
41.00	205	354	4
42.00	205	354	4

d	l	L	KM/MC
43.00	210	359	4
44.00	210	359	4
45.00	210	359	4
47.00	215	364	4
48.00	220	369	4
49.00	220	369	4
50.00	220	369	4
51.00	225	412	5
52.00	225	412	5
53.00	225	412	5
54.00	230	417	5
55.00	230	417	5
56.00	230	417	5
57.00	235	422	5
58.00	235	422	5
59.00	235	422	5
60.00	235	422	5
61.00	240	427	5
62.00	240	427	5
63.00	240	427	5
64.00	245	432	5
65.00	245	432	5
66.00	245	432	5
67.00	245	432	5
68.00	250	437	5
69.00	250	437	5
70.00	250	437	5
71.00	250	437	5
72.00	255	442	5
73.00	255	442	5
74.00	255	442	5
75.00	255	442	5
76.00	260	447	5
77.00	260	514	6
78.00	260	514	6
79.00	260	514	6
80.00	260	514	6
81.00	265	519	6
82.00	265	519	6



*Twist drills with taper shank, long series*

*DIN 341*

*Material: HSS*


*Manufacturing process: Fully ground, milled*

*Point angle: 118°, 135°*

*Finish: black oxide, bright, TiN coating*

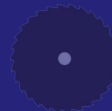
*Diameter: 8.0-30.0mm*

d	l	L	KM/MC	d	l	L	KM/MC	d	l	L	KM/MC
8.00	100	181	1	12.20	134	215	1	20.00	177	275	2
8.10	100	181	1	12.30	134	215	1	20.25	184	282	2
8.20	100	181	1	12.40	134	215	1	20.25	184	282	2
8.30	100	181	1	12.50	134	215	1	20.75	184	282	2
8.40	100	181	1	12.60	134	215	1	21.00	184	282	2
8.50	100	181	1	12.70	134	215	1	21.25	191	289	2
8.60	107	188	1	12.80	134	215	1	21.50	191	289	2
8.70	107	188	1	12.90	134	215	1	21.75	191	289	2
8.80	107	188	1	13.00	134	215	1	22.00	191	289	2
8.90	107	188	1	13.10	134	215	1	22.25	191	289	2
9.00	107	188	1	13.20	134	215	1	22.50	198	296	2
9.10	107	188	1	13.30	142	223	1	22.75	198	296	2
9.20	107	188	1	13.40	142	223	1	23.00	198	296	2
9.30	107	188	1	13.50	142	223	1	23.25	198	319	3
9.40	107	188	1	13.60	142	223	1	23.50	198	319	3
9.50	107	188	1	13.70	142	223	1	23.75	206	327	3
9.60	116	197	1	13.80	142	223	1	23.90	206	327	3
9.70	116	197	1	13.90	142	223	1	24.00	206	327	3
9.80	116	197	1	14.00	142	223	1	24.25	206	327	3
9.90	116	197	1	14.25	147	245	2	24.50	206	327	3
10.00	116	197	1	14.50	147	245	2	24.75	206	327	3
10.10	116	197	1	14.75	147	245	2	25.00	206	327	3
10.20	116	197	1	15.00	147	245	2	25.25	214	335	3
10.30	116	197	1	15.25	153	251	2	25.50	214	335	3
10.40	116	197	1	15.50	153	251	2	25.75	214	335	3
10.50	116	197	1	15.75	153	251	2	26.00	214	335	3
10.60	125	206	1	16.00	153	251	2	26.25	214	335	3
10.70	125	206	1	16.25	159	257	2	26.50	214	335	3
10.80	125	206	1	16.50	159	257	2	26.75	222	343	3
10.90	125	206	1	16.75	159	257	2	27.00	222	343	3
11.00	125	206	1	17.00	159	257	2	27.25	222	343	3
11.10	125	206	1	17.25	165	263	2	27.50	222	343	3
11.20	125	206	1	17.50	165	263	2	27.75	222	343	3
11.30	125	206	1	17.75	165	263	2	28.00	222	343	3
11.40	125	206	1	18.00	165	263	2	28.25	230	351	3
11.50	125	206	1	18.25	171	269	2	28.50	230	351	3
11.60	125	206	1	18.50	171	269	2	28.75	230	351	3
11.70	125	206	1	18.75	171	269	2	29.00	230	351	3
11.80	125	206	1	19.00	171	269	2	29.25	230	351	3
11.90	134	215	1	19.25	177	275	2	29.50	230	351	3
12.00	134	215	1	19.50	177	275	2	29.75	230	351	3
12.10	134	215	1	19.75	177	275	2	30.00	230	351	3

*SDS Plus drill bits*  
*Drill features:*  
*Body Material:40Cr*  
*Carbide tip:YG8C*  
*Heat treatment is processed by machine that made in Germany*  
*Apply in:concrete, granite, marble and other hard materials*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
4	110	12	160	20	160	28	600
4	160	12	210	20	210	28	800
5	110	12	260	20	260	28	1000
5	160	12	350	20	350	30	350
5	210	12	460	20	460	30	460
5	260	12	500	20	500	30	500
6	110	12	600	20	600	30	600
6	160	12	800	20	800	30	800
6	210	12	1000	20	1000	30	1000
6	260	14	110	22	160	32	350
6	350	14	160	22	210	32	460
7	110	14	210	22	260	32	500
7	160	14	260	22	350	32	600
7	210	14	350	22	460	32	800
7	260	14	460	22	500	32	1000
7	350	14	500	22	600	35	350
8	110	14	600	22	800	35	460
8	160	14	800	22	1000	35	500
8	210	14	1000	25	210	35	600
8	260	16	160	25	260	35	800
8	350	16	210	25	350	35	1000
8	460	16	260	25	460	38	350
8	500	16	350	25	500	38	460
8	600	16	460	25	600	38	500
8	800	16	500	25	800	38	600
8	1000	16	600	25	1000	38	800
10	110	16	800	26	210	38	1000
10	160	16	1000	26	260	40	350
10	210	18	160	26	350	40	460
10	260	18	210	26	460	40	500
10	350	18	260	26	500	40	600
10	460	18	350	26	600	40	800
10	500	18	460	26	800	40	1000
10	600	18	500	26	1000		
10	800	18	600	28	350		
10	1000	18	800	28	460		
12	110	18	1000	28	500		



### SDS Max drill bits

*Drill features:*

*Body Material:40Cr*

*Carbide tip:YG8C*

*Heat treatment is processed by machine that made in Germany*

*Apply in:concrete, granite, marble and other hard materials*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
10	260	22	320	30	800	40	500
12	260	22	350	30	920	40	540
14	260	22	500	30	1000	40	600
14	320	22	540	30	1320	40	800
14	350	22	600	32	320	40	920
16	260	22	800	32	350	40	1000
16	320	22	920	32	500	40	1320
16	350	22	1000	32	540	42	320
16	500	22	1320	32	600	42	350
16	540	25	260	32	800	42	500
16	600	25	320	32	920	42	540
16	800	25	350	32	1000	42	600
18	260	25	500	32	1320	42	800
18	320	25	540	35	320	42	920
18	350	25	600	35	350	42	1000
18	500	25	800	35	500	42	1320
18	540	25	920	35	540	45	320
18	600	25	1000	35	600	45	350
18	800	25	1320	35	800	45	500
18	920	28	320	35	920	45	540
18	1000	28	350	35	1000	45	600
18	1320	28	500	35	1320	45	800
20	260	28	540	38	320	45	920
20	320	28	600	38	350	45	1000
20	350	28	800	38	500	45	1320
20	500	28	920	38	540	50	320
20	540	28	1000	38	600	50	350
20	600	28	1320	38	800	50	500
20	800	30	320	38	920	50	540
20	920	30	350	38	1000	50	600
20	1000	30	500	38	1320	50	800
20	1320	30	540	40	320	50	920
22	260	30	600	40	350	50	1000





### Domestic hammer drill bits

Drill features:

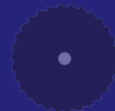
Body Material:40Cr

Carbide tip:YG8C

Heat treatment is processed by machine that made in Germany

Apply in:concrete, granite, marble and other hard materials

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
4	110	12	150	20	150	28	600
4	150	12	210	20	210	28	800
5	110	12	260	20	260	28	1000
5	150	12	350	20	350	30	350
5	210	12	460	20	460	30	460
5	260	12	500	20	500	30	500
6	110	12	600	20	600	30	600
6	150	12	800	20	800	30	800
6	210	12	1000	20	1000	30	1000
6	260	14	110	22	150	32	350
6	350	14	150	22	210	32	460
7	110	14	210	22	260	32	500
7	150	14	260	22	350	32	600
7	210	14	350	22	460	32	800
7	260	14	460	22	500	32	1000
7	350	14	500	22	600	35	350
8	110	14	600	22	800	35	460
8	150	14	800	22	1000	35	500
8	210	14	1000	25	210	35	600
8	260	16	150	25	260	35	800
8	350	16	210	25	350	35	1000
8	460	16	260	25	460	38	350
8	500	16	350	25	500	38	460
8	600	16	460	25	600	38	500
8	800	16	500	25	800	38	600
8	1000	16	600	25	1000	38	800
10	110	16	800	26	210	38	1000
10	150	16	1000	26	260	40	350
10	210	18	150	26	350	40	460
10	260	18	210	26	460	40	500
10	350	18	260	26	500	40	600
10	460	18	350	26	600	40	800
10	500	18	460	26	800	40	1000
10	600	18	500	26	1000		
10	800	18	600	28	350		
10	1000	18	800	28	460		
12	110	18	1000	28	500		



*Hex shank mode electric hammer drill*

*Drill features:*

*Body Material:40Cr*

*Carbide tip:YG8C*

*Heat treatment is processed by machine that made in Germany*

*Apply in:concrete, granite, marble and other hard materials*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
6	200	16	500	20	1000	30	1000
8	200	16	600	25	200	32	400
10	200	16	800	25	280	32	500
10	280	16	1000	25	400	32	600
12	200	18	200	25	500	32	800
12	280	18	280	25	600	32	1000
12	400	18	400	25	800	35	500
14	200	18	500	25	1000	35	600
14	280	18	600	28	400	35	800
14	400	18	800	28	500	35	1000
14	500	18	1000	28	600	38	500
14	600	20	200	28	800	38	600
14	800	20	280	28	1000	38	800
14	1000	20	400	30	400	38	1000
16	200	20	500	30	500	40	800
16	280	20	600	30	600	40	1000
16	400	20	800	30	800		



### Multi-functional masonry drill bits

*This masonry adopts high grade carbide alloy chip.*

*It easily drills through concrete.*

*Carbide chip is grinded by diamond, used to drill tiles, ceramic and other hard materials.*

*Apply in percussion drills, rechargeable electric drills and screw drivers.*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
3	60	6	200	10	120	14	200
4	60	7	100	10	200	16	150
5	85	8	120	12	120	16	200
6	100	8	200	14	150		



### Glass bits

*Apply in glasses and tiles.*

*Adding water when working can prolong its service life.*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
3	64	6	69	10	72	14	93
4	64	8	72	12	76	16	96
5	69						

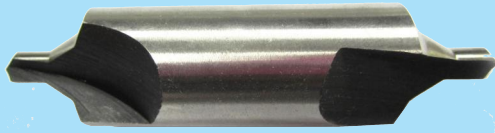
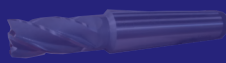


*Center drills-A type  
GB6078-85 (ISO866)  
Material: HSS*

*Center drills-A type  
ANSI B94.11M-79  
Material:HSS*

d	d1	L	l (max)	l (min)
0.50	3.15	31.5	1	0.8
0.63	3.15	31.5	1.2	0.9
0.80	3.15	31.5	1.5	1.1
1.00	3.15	31.5	1.9	1.3
1.25	3.15	31.5	2.2	1.6
1.60	4	35.5	2.8	2
2.00	5	40	3.3	2.5
2.50	6.3	45	4.1	3.1
3.15	8	50	4.9	3.9
4.00	10	56	6.2	5
5.00	12.5	63	7.5	6.3
6.30	16	71	9.2	8
8.00	20	80	11.5	10.1
10.00	25	100	14.2	12.8

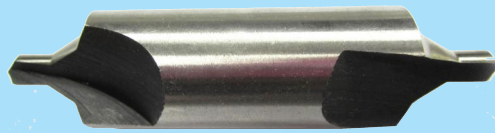
Size No.	D		d1		L		l	
	inch	mm	inch	mm	inch	mm	inch	mm
00	0.025	0.54	1/8	3.18	1-1/8	29	0.030	0.76
0	1/32	0.79					0.038	0.97
1	3/64	1.19			1-1/4	32	3/64	1.19
2	5/64	1.98	3/16	4.76	1-7/8	48	5/64	1.98
3	7/64	2.78	1/4	6.35	2	51	7/64	2.78
4	1/8	3.18	5/16	7.94	2-1/8	54	1/8	3.18
5	3/16	4.76	7/16	11.11	2-3/4	70	3/16	4.76
6	7/32	5.56	1/2	12.7	3	76	7/32	5.56
7	1/4	6.35	5/8	15.88	3-1/4	83	1/4	6.35
8	5/16	7.94	3/4	19.05	3-1/2	89	5/16	7.94



*Center drills-B type  
GB6078-85 (ISO866)  
Material: HSS*

*Center drills-B type  
ANSI B94.11M-79  
Material: HSS*

d	d1	d2	L	l (max)	l (min)	Size No.	D		d1		d1		L		l	
							inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1.00	4	2.12	35.5	1.9	1.3	11	3/64	1.19	1/8	3.18	0.10	2.5	1-1/4	32	3/64	1.19
1.25	5	2.65	40	2.2	1.6	12	1/16	1.59	3/16	4.76	0.15	3.8	1-7/8	48	1/16	1.59
1.60	6.3	3.35	45	2.8	2	13	3/32	2.38	1/4	6.35	0.20	5.1	2	51	3/32	2.38
2.00	8	4.25	50	3.3	2.5	14	7/64	2.78	5/16	7.94	0.25	6.4	2-1/8	54	7/64	2.78
2.50	10	5.3	56	4.1	3.1	15	5/32	3.97	7/16	11.11	0.35	8.1	2-3/4	70	5/32	3.97
3.15	11.2	6.7	60	4.9	3.9	16	3/16	4.76	1/2	12.7	0.40	10.2	3	76	3/16	4.76
4.00	14	8.5	67	6.2	5	17	7/32	5.56	5/8	15.88	0.50	12.7	3-1/4	83	7/32	5.56
5.00	18	10.6	75	7.5	6.3	18	1/4	6.35	3/4	19.05	0.60	15.2	3-1/2	89	1/4	6.35
6.30	20	13.2	80	9.2	8											
8.00	25	17	100	11.5	10.1											
10.00	31.5	21.2	125	14.2	12.8											




*Center drills-R type  
GB 6078-85  
Material: HSS*

d	d1	L	l	l (max)	l (min)
1	3.15	31.5	3	3.15	2.5
1.25	3.15	31.5	3.35	4	3.15
1.6	4	4	4.25	5	4
2	5	5	5.3	6.3	5
2.5	6.3	6.3	6.7	8	6.3
3.15	8	8	8.5	10	8
4	10	10	10.6	12.5	10
5	12.5	12.5	13.2	16	12.5
6.3	16	16	17	20	16
8	20	20	21.2	25	20
10	25	25	26.5	31.5	25



*Step drill  
material: HSS  
Size  
φ4-12mm  
φ4-20mm  
φ4-32 mm*



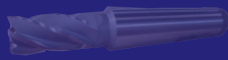
*Flat drill for wood, shank - hexagonal 1\4"  
material: carbon steel #45*

Size	Size	Size
8x152	16x152	24x152
10x152	18x152	26x152
12x152	20x152	28x152
14x152	22x152	30x152
		32x152

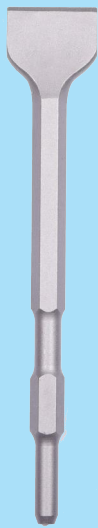


*Spiral drill for wood  
material: Carbon steel #45*

Size	Size	Size
6x230	14x230	20x460
8x230	14x460	22x460
8x460	15x230	25x230
10x230	15x460	28x460
12x230	16x230	32x230
12x460	20x230	32x460
		35x600



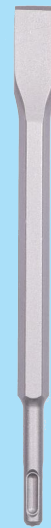
Cuspidal clay  
spade chisel



Hex flat chisel



Hex pointed chisel



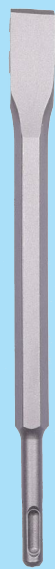
Hex flat chisel  
SDS-Plus



Hex pointed chisel  
SDS-Plus



Hex pointed chisel  
with four blades  
SDS-Plus



SDS Plus flat chisel  
round shank



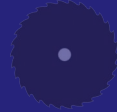
SDS Plus pointed  
chisel, round shank



SDS max flat chisel,  
round shank

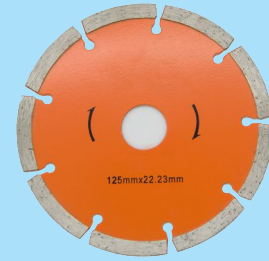


SDS max pointed  
chisel, round shank



## Segmented blade

Diameter	105, 110, 115, 125, 150, 180, 230 250, 300, 350, 400mm
Height	7, 10, 12, 15mm



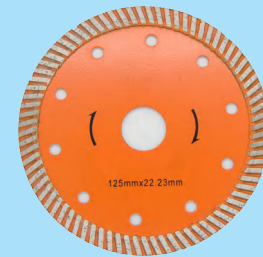
## Turbo blade

Diameter	105, 110, 115, 125, 180, 230, 300 350mm
Height	7, 10, 12mm



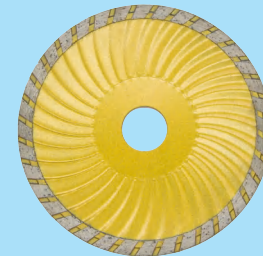
## Turbo wave blade

Diameter	105, 115, 125, 150, 180, 230, 300mm
Height	8, 10mm
Features	Turbo segmented blades with ideal debris removal and fast cutting



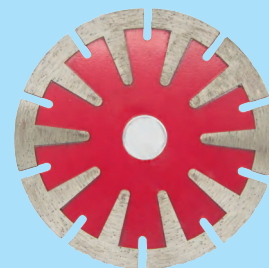
## Continuous rim blade

Diameter	55, 80, 89, 105, 110, 115, 125, 150 180, 200, 230, 250, 300, 350mm
Height	5, 7, 10mm
Features	Continuous rim blade for tile and porcelain cutting



## AG blade

Diameter	105, 115, 125, 180, 230, 300, 350mm
Height	7mm
Features	dust removal, with fast, smooth cutting and long life. The special segment style can well protect the blades in cutting.







Blade



T.C.T. Saw Blade



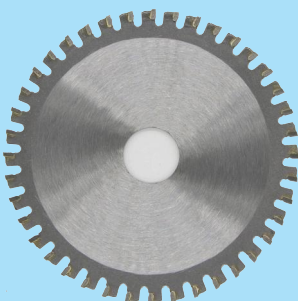
*T.C.T. Saw blade  
For solid wood & composite board*

Diameter	Inner hole	No. of Teeth
110	16/20	24-40
160	16/20/22.23	24-40
180	20/22.23/25.4	24-60
200	20/22.23/25.4	24-60
230	22.23/25.4/30	24-80
250	22.23/25.4/30	24-120
300	25.4/30/32	30-120
350	25.4/30/32	30-120



*T.C.T. Saw blade  
For aluminum & profile*

Diameter	Inner hole	No. of Teeth
110	16/20	40
160	16/20/22.23	40-60
180	20/22.23/25.4	40-60
200	20/22.23/25.4	60-80
230	22.23/25.4/30	60-80
250	22.23/25.4/30	96-120
300	25.4/30/32	96-120
350	25.4/30/32	100-120



*T.C.T. Saw blade  
For angle iron & galvanized pipe*

Diameter	Inner hole	No. of Teeth
110	16/20	24-30
160	16/20/22.23	24-40
180	20/22.23/25.4	30-48
200	20/22.23/25.4	30-52
230	22.23/25.4/30	40-60
250	22.23/25.4/30	40-60
300	25.4/30/32	40-60
350	25.4/30/32	40-60

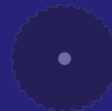


*T.C.T. Saw blade  
For cork board*

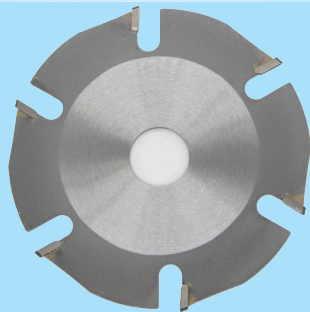
Diameter	Inner hole	No. of Teeth
110	16/20	24-40
160	16/20/22.23	24-40
180	20/22.23/25.4	24-60
200	20/22.23/25.4	24-60
230	22.23/25.4/30	24-80
250	22.23/25.4/30	24-120
300	25.4/30/32	30-120
350	25.4/30/32	30-120



# Blade



## T.C.T. Saw Blade



**T.C.T. Slotted saw blade**  
For cutting solid wood

Diameter	Inner hole	No. of Teeth
110	20/25.4/30	6
160	20/25.4/30	8
180	20/25.4/30	12-18
200	20/25.4/30	12-18



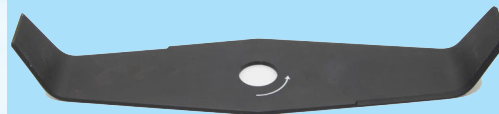
**T.C.T. Saw blade**  
For cutting grass

Diameter	Inner hole	No. of Teeth	Body thickness
230	25.4	36	1.3
255	25.4	40	1.3
255	25.4	60	1.3



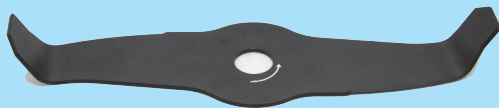
**T.C.T. Saw blade**  
For cutting grass

Diameter	Inner hole	No. of Teeth	Body thickness
230	25.4	36	2
255	25.4	40	2
255	25.4	60	2



**T.C.T. Saw blade**  
For cutting grass

Diameter	Inner hole	No. of Teeth	Body thickness
255	25.4	2	2.5-4.0
305	25.4	2	2.5-4.0



**T.C.T. Saw blade**  
For cutting grass

Diameter	Inner hole	No. of Teeth	Body thickness
255	25.4	2	2.5-4.0
305	25.4	2	2.5-4.0



**T.C.T. Saw blade**  
For cutting grass

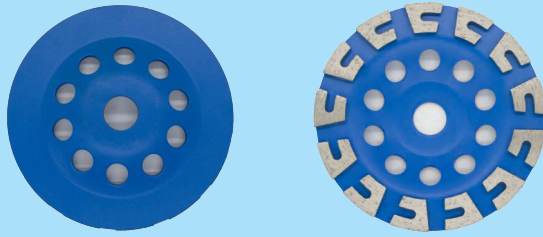
Diameter	Inner hole	No. of Teeth	Body thickness
255	25.4	4	1.4-1.6
305	25.4	4	1.4-1.6



# Dimaond grinding wheels



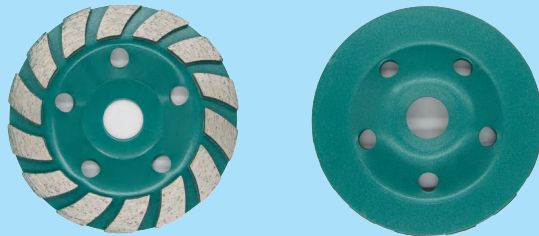
Dimaond grinding wheels



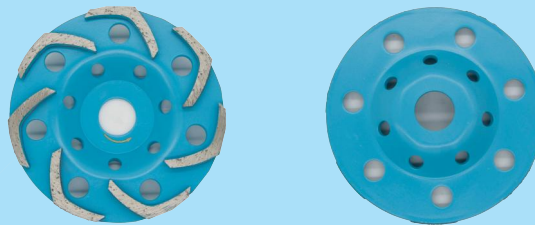
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



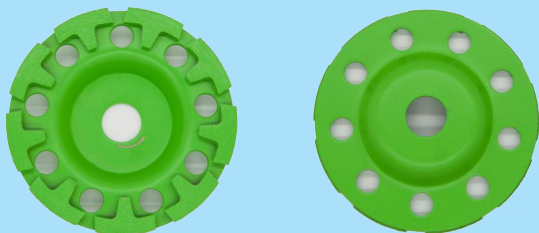
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



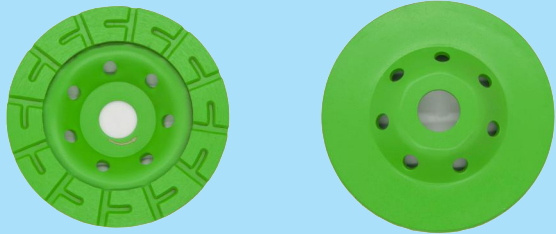
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material




Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material




Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material

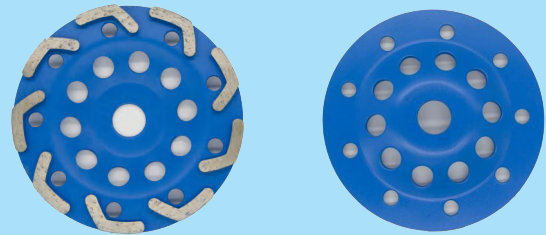
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



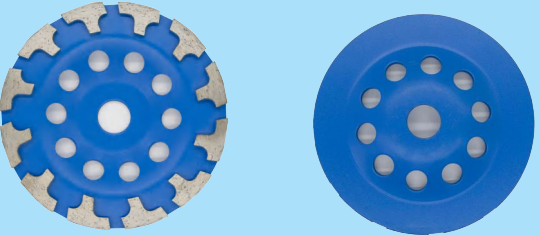
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



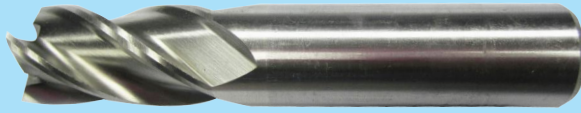
Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material



Diameter	105, 110, 115, 125mm
Applications	For granite, marble and abrasive concrete and other masonry material

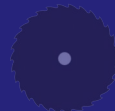


End mills with straight shank  
ГОСТ 17025-71  
material:HSS

d	L	l	d1	Z	
				Type 1	Type 2
2.0	39	7	4	4	
3.0	40	8	4	4	
4.0	40	8	4	4	
5.0	47	13	5	4	3
6.0	57	13	6	4	3
7.0	60	16	8	4	3
8.0	63	19	8	4	3
9.0	63	19	10	4	3

d	L	l	d1	Z	
				Type 1	Type 2
10.0	72	22	10	4	3
11.0	83	26	12	4	3
12.0	83	26	12	5	4
14.0	83	26	12	5	-
16.0	92	32	16	5	-
18.0	92	32	16	6	-
20.0	104	38	20	6	-
22.0	104	38	20	6	-
25.0	121	45	25	6	-
28.0	121	45	25	6	-





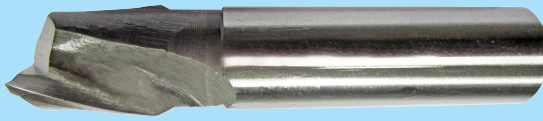
*End mills with morse taper shank  
ГОСТ 17026-71  
material: HSS*

d	L	l	Z		KM/MC
			Type 1	Type 2	
10	92	22	4	3	1
11	92	22	4	3	1
12	96	26	4	3	1
12	111	26	4	3	2
14	96	26	4	3	1
14	111	26	4	3	2
16	117	32	4	3	2
18	117	32	4	3	2
20	123	38	5	3	2
20	140	38	5	3	3
22	123	38	5	3	2
22	140	38	5	3	3
24	147	45	5	3	3
25	147	45	5	3	3
26	147	45	5	3	3
28	147	45	5	3	3
28	170	45	5	3	4
30	155	53	6	4	3

d	L	l	Z		KM/MC
			Type 1	Type 2	
30	178	53	6	4	4
32	155	53	6	4	3
32	178	53	6	4	4
35	178	53	6	4	4
36	155	53	6	4	3
36	178	53	6	4	4
38	178	53	6	4	4
40	188	63	6	4	4
40	221	63	6	4	5
45	188	63	6	4	4
45	221	63	6	4	5
50	200	75	6	4	4
50	233	75	6	4	5
56	200	75	8	5	4
56	233	75	8	5	5
60	233	75	8	5	5
63	248	90	8	5	5



# End mills

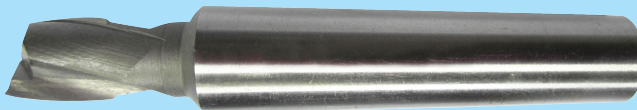


Slotting end mills with straight shank  
center cutting  
ГОСТ 9140;78  
material: HSS

d	L	l	d1
2.0	36	4	2
2.0	36	4	4
3.0	37	5	3
3.0	37	5	4
4.0	39	7	4
5.0	42	8	5
6.0	52	8	6
6.0	54	10	7

d	L	l	d1
7.0	54	10	7
7.0	54	10	8
8.0	55	11	8
10.0	63	13	10
12.0	73	16	12
14.0	73	16	14
14.0	73	16	12
16.0	79	19	16

d	L	l	d1
18.0	79	19	18
18.0	79	19	16
20.0	88	22	20
22.0	88	22	20
25.0	102	26	25
28.0	102	26	25

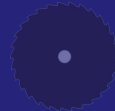


Slotting end mills with morse taper  
shank  
center cutting  
ГОСТ 9140 78  
material: HSS

d	L	l	KM/MC
10	83	13	1
12	86	16	1
12	101	16	2
14	86	16	1
14	101	16	2
16	104	19	2
18	104	19	2
20	107	22	2

d	L	l	KM/MC
20	124	22	3
22	107	22	2
22	124	22	3
25	128	26	3
26	128	26	3
28	128	26	3
30	134	32	3
30	157	32	4

d	L	l	KM/MC
32	134	32	3
32	157	32	4
36	134	32	3
36	157	32	4
40	163	38	4
40	196	38	5



*Cut-off mills*  
*Gost 2679-73*  
*material:HSS*

D	L	d	Z		
			Coarse	Middle	Fine
20	0.20	5			80
20	0.25	5			64
20	0.30	5			64
20	0.40	5			64
20	0.50	5			48
20	0.60	5			48
20	0.80	5			48
20	1.00	5			40
20	1.20	5			40
20	1.60	5			40
20	2.00	5			32
25	0.20	8			80
25	0.25	8			80
25	0.30	8			80
25	0.40	8			64
25	0.50	8			64
25	0.60	8			64
25	0.80	8			48
25	1.00	8			48
25	1.20	8			48
25	1.60	8			40
25	2.00	8			40
25	2.50	8			40
32	0.20	8			100
32	0.25	8			100
32	0.30	8		40	80
32	0.40	8		40	80
32	0.50	8		40	80
32	0.60	8		32	64
32	0.80	8		32	64

D	L	d	Z		
			Coarse	Middle	Fine
32	1.00	8		32	64
32	1.20	8		24	48
32	1.60	8		24	48
32	2.00	8		24	48
32	2.50	8		20	40
32	3.00	8		20	40
40	0.20	10			128
40	0.25	10			128
40	0.30	10		48	100
40	0.40	10		48	100
40	0.50	10		48	100
40	0.60	10		40	80
40	0.80	10		40	80
40	1.00	10		32	64
40	1.20	10		32	64
40	1.60	10		32	64
40	2.00	10		24	48
40	2.50	10		24	48
40	3.00	10		24	48
40	4.00	10		20	40
50	0.25	13			128
50	0.30	13		64	128
50	0.40	13		48	100
50	0.50	13		48	100
50	0.60	13		48	100
50	0.80	13	24	40	80
50	1.00	13	24	40	80
50	1.20	13	24	40	80
50	1.60	13	20	32	64
50	2.00	13	20	32	64
50	2.50	13	20	32	64





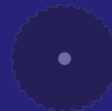
# Cut of mills



End mills

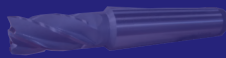
D	L	d	Z		
			Coarse	Middle	Fine
50	3.00	13	16	24	48
50	3.00	13	16	24	48
50	4.00	13	16	24	48
63	0.30	16		64	128
63	0.40	16		64	128
63	0.50	16		64	100
63	0.60	16		48	100
63	0.80	16	32	48	100
63	1.00	16	32	48	80
63	1.20	16	24	40	80
63	1.60	16	24	40	80
63	2.00	16	24	40	64
63	2.50	16	20	32	64
63	3.00	16	20	32	64
63	4.00	16	20	32	48
63	5.00	16	16	24	48
63	6.00	16	16	24	48
80	0.50	22			128
80	0.60	22		64	128
80	0.80	22	40	64	128
80	1.00	22	32	64	100
80	1.20	22	32	48	100
80	1.60	22	32	48	100
80	2.00	22	24	48	80
80	2.50	22	24	40	80
80	3.00	22	24	40	80
80	4.00	22	20	40	64
80	5.00	22	20	32	64
80	6.00	22	20	32	64
100	0.60	22			160
100	0.80	22	40	64	128
100	1.00	22	40	64	128
100	1.20	22	40	64	128
100	1.60	22	32	48	100
100	2.00	22	32	48	100
100	2.50	22	32	48	100
100	3.00	22	24	40	80
100	4.00	22	24	40	80
100	5.00	22	24	40	10

D	L	d	Z		
			Coarse	Middle	Fine
100	6.00	22	20	32	64
125	0.80	22			160
125	1.00	22	48	80	160
125	1.20	22	40	64	128
125	1.60	22	40	64	128
125	1.60	22	40	64	128
125	2.00	22	40	64	128
125	2.50	22	32	48	100
125	3.00	22	32	48	100
125	4.00	22	32	48	100
125	5.00	22	24	40	80
125	6.00	22	24	40	80
160	1.20	32	48	80	160
160	1.60	32	48	80	160
160	2.00	32	40	64	128
160	2.50	32	40	64	128
160	3.00	32	40	64	128
160	4.00	32	32	48	100
160	5.00	32	32	48	100
160	6.00	32	32	48	100
200	1.60	32	48	80	160
200	2.00	32	48	80	160
200	2.50	32	48	80	160
200	3.00	32	40	64	128
200	4.00	32	40	64	128
200	5.00	32	40	64	128
200	6.00	32	32	48	10
250	2.00	32	64	100	200
250	2.50	32	48	80	160
250	3.00	32	48	80	160
250	4.00	32	48	80	160
250	5.00	32	40	64	128
250	6.00	32	40	64	128
315	2.50	40	64	100	200
315	3.00	40	64	100	200
315	4.00	40	48	80	160
315	5.00	40	48	80	160
315	6.00	40	48	80	160

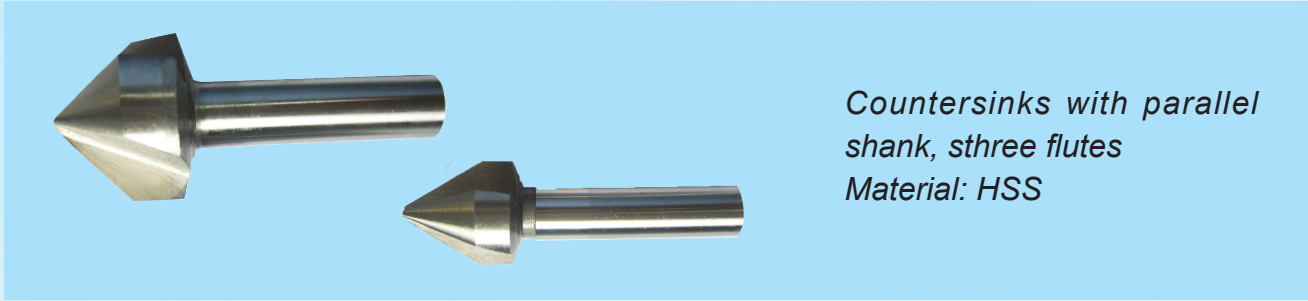


*Countersinks with parallel shank, single flute*  
*Material: HSS*

Size	D	d	L	l	Type	
6.3×60°	6.3	5	45	7.6	I	
8×60°	8	6	50	9.5		
10.4×60°	10.4			12		
12.5×60°	12.5	8	56	14		
16×60°	16	10	63	17.5		
20×60°	20		67	21.5		
25×60°	25		71	26		
30×60°	30	12	73	30		
31×60°	31			31		
35×60°	25		82	35		
40×60°	40		92	40		
50×60°	50	100	49	II		
60×60°	60	120	58			
4.3×60°	4.3	4	40	4.2		
5×90°	5			4.8		
5.3×90°	5.3			5	5.3	
5.8×90°	5.8				5.8	
6×90°	6	5.9				
6.3×90°	6.3	6	50	6.6		
7×90°	7			7		
7.3×90°	7.3	6	50	7.8		
8×90°	8			8.4		
8.3×90°	8.3			8.9		
9.4×90°	9.4			9.4		
10×90°	10	8	56	10		
10.4×90°	10.4			10.6		
11.5×90°	11.5			11.6		
12.4×90°	12.4	10	60	13		
13.4×90°	13.4			14.3		
15×90°	15	10	63	15.1		
16.5×90°	16.5			16.9		
19×90°	19			18		
20.5×90°	20.5	12	67	20		
23×90°	23			22		
25×90°	25			25		
26×90°	26			30.6		
28×90°	28	12	71	36		
30×90°	30			20		
31×90°	31			22		
35×90°	35			25		
40×90°	40	12	92	25		
50×90°	50				100	30.6
60×90°	60				120	36



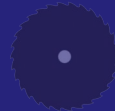
# Countersinks



Countersinks with parallel shank, sthree flutes  
Material: HSS

Countersinks

Size	D	d	L	l	Type		
6.3×60°	6.3	5	45	6.3	I		
8×60°	8	6	50	8			
10.4×60°	10.4			10			
12.5×60°	12.5	8	56	11.2			
16×60°	16			10		63	14
20×60°	20						17
25×60°	25	12	71	21.5			
30×60°	30			26			
31×60°	31	12	73	27			
35×60°	25			10		82	31
40×60°	40						12
50×60°	50			12		100	
60×60°	60	12	120				54
4.3×60°	4.3			4		40	3.5
5×90°	5	5	45		4		
5.3×90°	5.3			5	45	4.5	
5.8×90°	5.8	6	50			5	
6×90°	6			6	50	5.6	
6.3×90°	6.3	6	50			6	
7×90°	7			6	50	6.7	
7.3×90°	7.3	6	50			7.1	
8×90°	8			6	50	7.5	
8.3×90°	8.3	8	56			8	
9.4×90°	9.4			8	56	8.5	
10×90°	10	8	56			9	
10.4×90°	10.4			8	56	10	
11.5×90°	11.5	10	60			11.2	
12.4×90°	12.4			10	63	12.5	
13.4×90°	13.4	10	63			13.2	
15×90°	15			10	67	15	
16.5×90°	16.5	10	67			16	
19×90°	19			12	71	18	
20.5×90°	20.5	12	71			21	
23×90°	23			12	71	23	
25×90°	25	12	71			28.5	
26×90°	26			12	71	33.8	
28×90°	28	12	71				
30×90°	30			12	71		
31×90°	31	12	71				
35×90°	35			12	71		
40×90°	40	12	71				
50×90°	50			12	71		
60×90°	60	12	71				



### Hand reamers

DIN205

Material: HSS, 9CrSi

Type 1: with straight flutes

Type 2: with helix flutes

D	d	L	l	a
6.0	6.0	93	47	4.5
6.3	6.3	93	47	5.0
6.5	6.5	93	47	5.0
7.0	7.0	107	54	5.6
7.5	7.5	107	54	5.6
8.0	8.0	115	58	6.3
8.5	8.5	115	58	6.3
9.0	9.0	124	62	7.1
9.5	9.5	124	62	7.1
10.0	10.0	133	66	8.0
10.5	10.5	133	66	8.0
11.0	11.0	142	71	9.0
11.5	11.5	142	71	9.0
12.0	12.0	152	76	10.0
13.0	13.0	152	76	10.0
14.0	14.0	163	81	11.2
15.0	15.0	163	81	11.2
16.0	16.0	175	87	12.5
17.0	17.0	175	87	12.5
18.0	18.0	188	93	14.0
19.0	19.0	188	93	14.0
20.0	20.0	201	100	16.0
21.0	21.0	201	100	16.0
22.0	22.0	215	107	18.0
23.0	23.0	215	107	18.0
24.0	24.0	231	115	20.0

D	d	L	l	a
25.0	25.0	231	115	20.0
26.0	26.0	231	115	20.0
27.0	27.0	247	124	22.4
28.0	28.0	247	124	22.4
30.0	30.0	247	124	22.4
32.0	32.0	265	133	25.0
34.0	34.0	284	142	28.0
35.0	35.0	284	142	28.0
36.0	36.0	284	142	28.0
37.0	37.0	305	152	28.0
38.0	38.0	305	152	31.5
40.0	40.0	305	152	31.5
42.0	42.0	305	152	31.5
44.0	44.0	326	163	35.5
45.0	45.0	326	163	35.5
46.0	46.0	326	163	35.5
47.0	47.0	326	163	35.5
48.0	48.0	347	174	40.0
50.0	50.0	347	174	40.0
52.0	52.0	347	174	40.0
55.0	55.0	367	184	45.0
56.0	56.0	367	184	45.0
58.0	58.0	367	184	45.0
60.0	60.0	367	184	45.0



# Reamers



Reamers



*Machine reamers with straight shank*

*DIN212*

*Material: HSS*

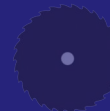
*Type 1: with straight flutes*

*Type 2: with helix flutes*

D	d	L	l
4.0	4.0	75	19
4.5	4.5	80	21
5.0	5.0	86	23
5.5	5.6	93	26
6.0	5.6	93	26
7.0	7.1	109	31
8.0	8.0	117	33
9.0	9.0	125	36
10.0	10.0	133	38
11.0	10.0	142	41

D	d	L	l
12.0	10.0	151	44
13.0	10.0	151	44
14.0	12.5	160	47
15.0	12.5	162	50
16.0	12.5	170	52
17.0	14.0	175	54
18.0	14.0	182	56
19.0	15.0	189	58
20.0	15.0	195	60





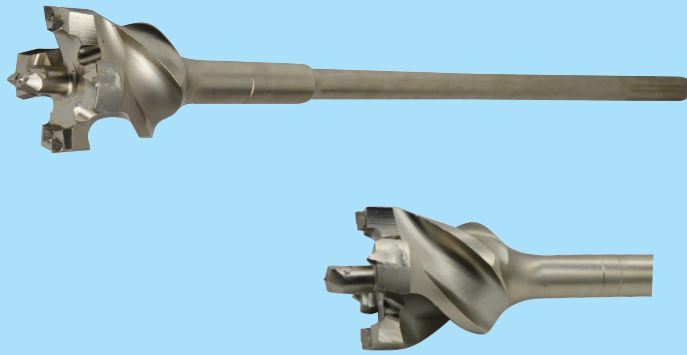
*Machine reamers with taper shank*

*ГОСТ1672-80*

*Material: HSS*

D	d	L	l
10	168	38	1
10	140	16	1
11	175	41	1
11	140	16	1
12	182	44	1
12	150	18	1
13	182	44	1
13	150	18	1
14	189	47	1
14	160	18	1
15	204	50	1
15	204	50	2
15	160	18	1
15	160	18	2
16	210	52	2
16	170	18	2
17	214	54	2
17	170	18	2
18	219	56	2
18	180	20	2
19	223	58	2
19	190	20	2
20	228	60	2
20	190	20	2
21	232	62	2
22	237	64	2
22	200	20	2
23	241	68	2

D	d	L	l
24	268	68	3
24	210	20	3
25	268	68	3
25	220	22	3
26	273	70	3
26	220	22	3
27	277	71	3
28	277	71	3
28	240	22	3
30	240	25	3
30	281	73	3
32	317	77	3
32	317	77	4
32	240	25	3
32	240	25	4
34	321	78	4
35	321	78	4
36	325	79	4
38	329	81	4
40	329	81	4
42	333	82	4
44	336	83	4
45	336	83	4
46	340	84	4
48	344	86	4
50	344	86	4



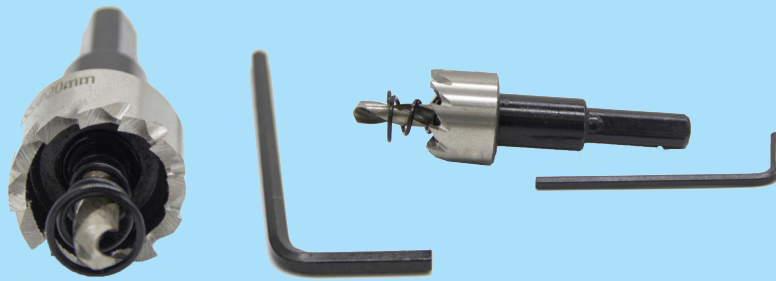
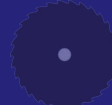
*Special hollow drills  
Also called hollow hammer drills.  
For making wall holes in brick  
concrete structure buildings.  
Hammer special used for making  
cement walls, bricks, steels, ceramic  
tiles, and stones not play  
Apply in: brick walls, concrete walls,  
foam bricks and hollow bricks.*

Diameter (mm)	Length (mm)	Diameter (mm)	Length (mm)	Diameter (mm)	Length (mm)	Diameter (mm)	Length (mm)
40	280	50	280	60	280	68	280
40	320	50	320	60	320	68	320
40	550	50	550	60	550	68	550
40	600	50	600	60	600	68	600
40	700	50	700	60	700	68	700
40	800	50	800	60	800	68	800
40	1000	50	1000	60	1000	68	1000
45	280	55	280	65	280	72	280
45	320	55	320	65	320	72	320
45	550	55	550	65	550	72	550
45	600	55	600	65	600	72	600
45	700	55	700	65	700	72	700
45	800	55	800	65	800	72	800
45	1000	55	1000	65	1000	72	1000



*Hollow core drill bits  
Apply in glasses and tiles.  
Adding water when working can  
prolong its service life.*

直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)	直径 (mm)	长度 (mm)
Diameter	Length	Diameter	Length	Diameter	Length	Diameter	Length
25	72	55	72	85	72	115	72
30	72	60	72	90	72	120	72
35	72	65	72	95	72	125	72
40	72	70	72	100	72	130	72
45	72	75	72	105	72	150	72
50	72	80	72	110	72	160	72



Hole saw  
material: HSS

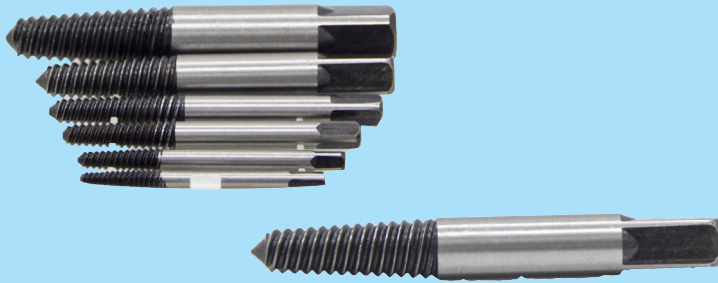
Size	Size	Size
15mm	19mm	28mm
16mm	21mm	30mm
17mm	22mm	32mm
18mm	24mm	38mm



Bi-metal Hole saw  
Material of tooth: M3: ,  
Product body material :  
spring steel  
Material of flat cover: Carbon  
steel #45

Size	Size	Size	Size	Size
φ14	φ29	φ44	φ65	φ92
φ16	φ30	φ46	φ67	φ95
φ17	φ32	φ48	φ68	φ98
φ19	φ33	φ51	φ70	φ102
φ20	φ35	φ52	φ73	φ105
φ21	φ37	φ54	φ76	φ108
φ22	φ38	φ57	φ79	φ111
φ24	φ40	φ59	φ83	φ114
φ25	φ41	φ60	φ86	φ121
φ27	φ43	φ64	φ89	φ127
				φ133
				φ140

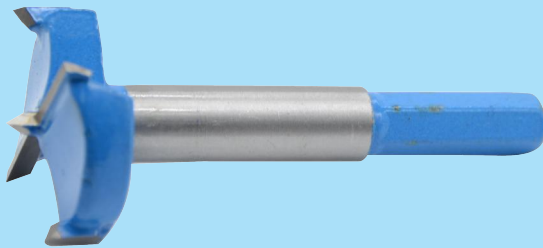




*Screw extractor set, 6pcs/set,  
Material: carbon steel*

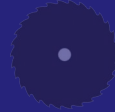
Size
3-6MM
6-8MM
8-11MM

Size
11-14MM
14-18MM
18-22MM



*Forstner bit, carbide plates  
The basal material is 45# carbon steel,  
integral thermal treatment, welding with  
carbide tool bit, the tool bit material is YG8  
Diameter:15-100mm*

D	L	D	L	D	L
15	85	30	85	55	85
16	85	32	85	60	85
18	85	35	85	65	85
19	85	38	85	70	85
20	85	40	85	75	85
22	85	42	85	80	85
23	85	45	85	85	85
25	85	48	85	90	85
26	85	50	85	95	85
28	85	53	85	100	85



### Brazing hole saw

**Material:** C45, without thermal treatment; **Part of diamond:**

**granularity 40-45, kg grade 30KG, type 5 material**

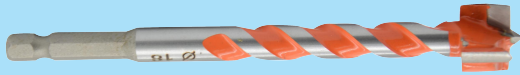
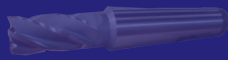
**Total length is 60mm, barrel length is 35mm , depth of cutting part is 35mm, emery height is not less than 10mm,**

**the screw hole is used for connecting handle, its size is M14, less than 18 mm, the middle hole**

**is filled with wax, the significant advantage is no need to add water when drilling holes, mainly using objects:**

**ceramic tile with the hardness grade level 7 and above , Marble granite, hard floor tile, concrete, construction bricks, hard concrete ceramics, etc.**

size	size	L	l	Diameter of threaded hole
6	15/64"	60	35	M/14
8	5/16"	60	35	M/14
10	3/8"	60	35	M/14
12	15/32"	60	35	M/14
15	19/32"	60	35	M/14
16	5/8"	60	35	M/14
18	11/16"	60	35	M/14
20	3/4"	60	35	M/14
22	7/8"	60	35	M/14
25	1"	60	35	M/14
27	1-1/16"	60	35	M/14
30	1-3/16"	60	35	M/14
32	1-1/4"	60	35	M/14
35	1-3/8"	60	35	M/14
38	1-1/2"	60	35	M/14
40	1-9/16"	60	35	M/14
41	1-5/8"	60	35	M/14
45	1-3/4"	60	35	M/14
50	1-31/32"	60	35	M/14
55	2-11/64"	60	35	M/14
57	2-1/4"	60	35	M/14
60	2-3/8"	60	35	M/14
64	2-17/32"	60	35	M/14
65	2-9/16"	60	35	M/14
70	2-3/4"	60	35	M/14
75	2-61/64"	60	35	M/14
80	3-5/32"	60	35	M/14
85	3-11/32"	60	35	M/14
90	3-9/16"	60	35	M/14
95	3-3/4"	60	35	M/14
100	3-15/16"	60	35	M/14
115	4-17/32"	60	35	M/14
120	4-3/4"	60	35	M/14



*Forstner bit, threads lengthened woodworking  
The basal material is 45# carbon steel, integral thermal treatment, welding with carbide tool bit, the tool bit material is YG8  
Diameter:16-35mm*

D	L
16	128
18	128
19	128
20	128
22	128

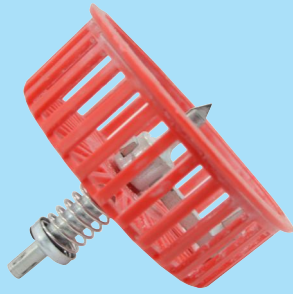
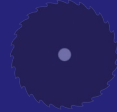
D	L
25	128
28	128
30	128
32	128
35	128



*Hole opener for diamond and marble  
Material::The basal material is 45# carbon steel, thermal treatment, integral nickel plating, working face electroplated with diamond powder, the basal wall thickness is 0.8mm, the total thickness of working face is 1.8mm, the working face height is 6mm*

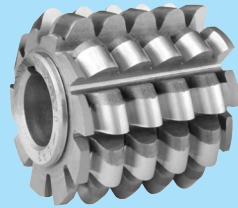


*Multi-purpose saw blades  
Material:HCS/BIM M42/CrV, the product surface is sprayed with black paint, the handle can be changed quickly,  
used for grinding, cutting metal, wood and gypsum board, etc.*



*Material: The material of positioning drill is 45# steel, tool bit material is Zhuzhou YG8, turnery processed ;  
Bar material is 20# steel, casting piece, tool bit material is Zhuzhou YG8, with red plastic cover*

*Size:  $\phi$ 20-94mm*



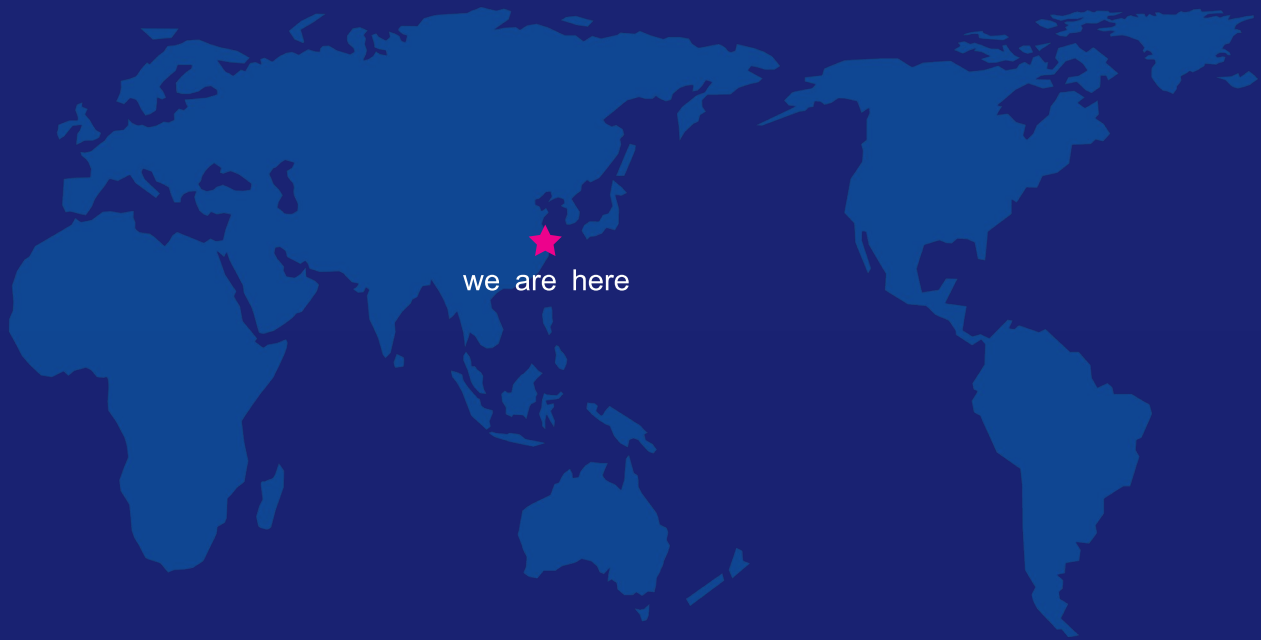
*Modular mill, with inserted knives, GOST 9324-80  
Material: HSS M2*



*Tail Cutter  
Material: HSS M2*

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