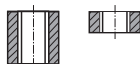


**COMBO TAPS****Combo** TAP**TQ438** SERIES**TB438** SERIES**MF** ISO Metric fine threads DIN 13
Metrisches ISO-Feingewinde DIN 13

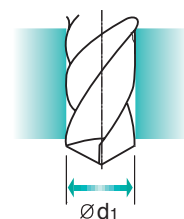
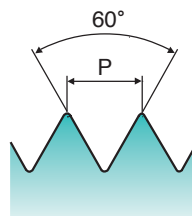
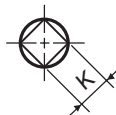
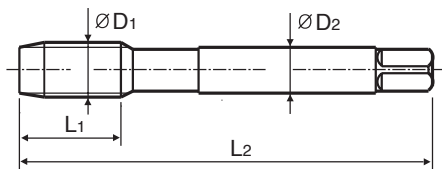
► For stainless steels and correct thread profiles & long tool life due to special tap geometry. YG-1 company has a patent.

► Für rostfreie stähle, genaue Gewindeprofile und lange Standzeit dank einer besonderen Schneidengeometrie. Von YG-1 patentiert.

Hole type

up to M12

over M12

HSS-PM**HSS-E****DIN 374****6H****Vap****Machine taps**
Maschinengewindebohrer

Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Shank Diameter	Square Size	Tapping Drill Diameter
ØD1	P		L1	L2	ØD2	K	Ød1
M4	× 0.5	TQ438256	10	63	2.8	2.1	3.5
M5	× 0.5	TQ438296	11	70	3.5	2.7	4.5
M6	× 0.75	TQ438326	13	80	4.5	3.4	5.2
M6	× 0.5	TQ438336	13	80	4.5	3.4	5.5
M7	× 0.75	TQ438356	14	80	5.5	4.3	6.2
M8	× 1.0	TQ438376	17	90	6	4.9	7
M8	× 0.75	TQ438386	14	80	6	4.9	7.2
M10	× 1.25	TQ438436	22	100	7	5.5	8.8
M10	× 1.0	TQ438446	18	90	7	5.5	9
M10	× 0.75	TQ438456	18	90	7	5.5	9.2
M12	× 1.5	TQ438516	22	100	9	7	10.5
M12	× 1.25	TQ438526	22	100	9	7	10.8
M12	× 1.0	TQ438536	18	100	9	7	11
M14	× 1.5	TB438556	22	100	11	9	12.5
M14	× 1.25	TB438566	22	100	11	9	12.8
M14	× 1.0	TB438576	18	100	11	9	13

► HSS-PM(M4~M12/TQ438) and HSS-E(M14~M30/TB438)

* Coating(TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm²

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
○	○	○	○	○	○	◎	◎							
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
				○										

MF

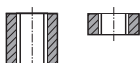
ISO Metric fine threads DIN 13

Metrisches ISO-Feingewinde DIN 13

► For stainless steels and correct thread profiles & long tool life due to special tap geometry. YG-1 company has a patent.

► Für rostfreie stähle, genaue Gewindeprofile und lange Standzeit dank einer besonderen Schneidengeometrie. Von YG-1 patentiert.

Hole type



Material groups
VA

up to M12

over M12

HSS-PM

HSS-E

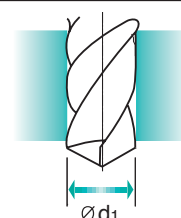
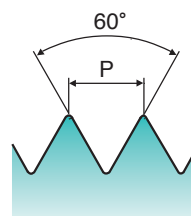
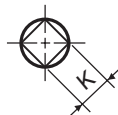
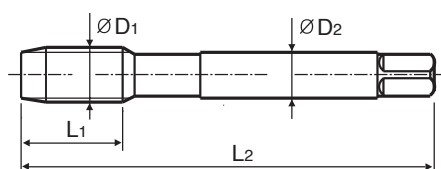
DIN 374

6H



Vap

Machine taps
Maschinengewindebohrer



Unit : mm

SIZE	Pitch	EDP No.	Thread Length	Overall Length	Shank Diameter	Square Size	Tapping Drill Diameter
ØD1	P		L1	L2	ØD2	K	Ød1
M16	× 1.5	TB438616	22	100	12	9	14.5
M16	× 1.0	TB438626	18	100	12	9	15
M18	× 1.5	TB438676	25	110	14	11	16.5
M18	× 1.0	TB438686	20	110	14	11	17
M20	× 1.5	TB438726	25	125	16	12	18.5
M20	× 1.0	TB438736	20	125	16	12	19
M22	× 1.5	TB438766	25	125	18	14.5	20.5
M22	× 1.0	TB438776	20	125	18	14.5	21
M24	× 2.0	TB438796	27	140	18	14.5	22
M24	× 1.5	TB438806	27	140	18	14.5	22.5
M26	× 1.5	TB438856	28	140	18	14.5	24.5
M27	× 2.0	TB438876	28	140	20	16	25
M27	× 1.5	TB438886	28	140	20	16	25.5
M28	× 1.5	TB438916	28	140	20	16	26.5
M30	× 2.0	TB438966	30	150	22	18	28
M30	× 1.5	TB438976	30	150	22	18	28.5

► HSS-PM(M4~M12/TQ438) and HSS-E(M14~M30/TB438)

* Coating(TiN, TiCN or TiAlN) is available on your request.

Unit : N/mm²

◎ : Excellent ○ : Good

Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
○	○	○	○	○	○	◎	◎	◎	◎	◎	◎	◎	◎	◎
Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

357

CUTTING SPEED TABLE

CUTTING SPEED TABLE SCHNITTGESCHWINDIGKEITSTABELLE

Cutting Speeds m/min. into revolutions per minute

TOOL R.P.M.(rev/min)																
Tool Dia.	Cutting Speed (m/min)															
	1	2	3	4	5	6	8	10	12	15	20	25	30	40	50	60
1	318	637	955	1274	1592	1910	2548	3185	3822	4777	6396	7962	9554	12739	15924	19108
2	159	318	478	637	796	955	1274	1592	1911	2388	3185	3981	4777	6369	7962	9554
3	106	212	318	425	531	637	849	1062	1274	1592	2123	2654	3185	4246	5308	6369
4	80	159	239	318	398	478	637	796	955	1194	1592	1990	2389	3185	3981	4777
5	64	127	191	255	318	382	510	637	764	955	1274	1592	1911	2548	3185	3822
6	53	106	159	212	265	318	425	531	637	796	1062	1327	1592	2123	2653	3185
8	40	80	119	159	199	239	318	398	478	597	796	955	1194	1592	1990	2388
10	31	64	96	127	159	191	255	318	382	478	637	796	955	1274	1592	1911
12	26	53	80	106	133	159	212	265	318	398	531	663	796	1062	1327	1592
14	23	45	68	91	114	136	182	227	273	341	455	569	682	910	1137	1365
16	20	40	60	80	100	119	159	199	239	299	398	498	597	796	995	1194
18	18	35	53	71	88	106	142	177	212	265	354	442	531	708	885	1062
20	16	32	48	64	80	96	127	159	191	239	318	398	478	637	796	955
25	13	25	38	51	64	76	102	127	153	191	255	318	382	510	637	764
30	11	21	32	42	53	64	85	106	127	159	212	265	318	425	531	637
35	9	18	27	36	45	55	73	91	109	136	182	227	273	364	455	546
40	8	16	24	32	40	48	64	80	96	119	159	199	239	118	398	478

RPM = rev/min

V = m/min

D = Dia.(mm)

$$V = \frac{RPM \cdot \pi \cdot D}{1000}$$

$$RPM = \frac{1000 \cdot V}{\pi \cdot D}$$