

# THE SPECIALIST: COLOUR RING MACHINE TAP

The GSR colour ring machine taps are the specialists among the GSR machine taps. Their rake angles are optimised for the special conditions of different materials. The colour ring is applied using a state-of-the-art LED light method.

CONSTRUCTION  
STEELS



STAINLESS  
STEELS



TITANIUM/NICKEL  
STEELS



ALUMINIUM/  
COPPER ALLOYS



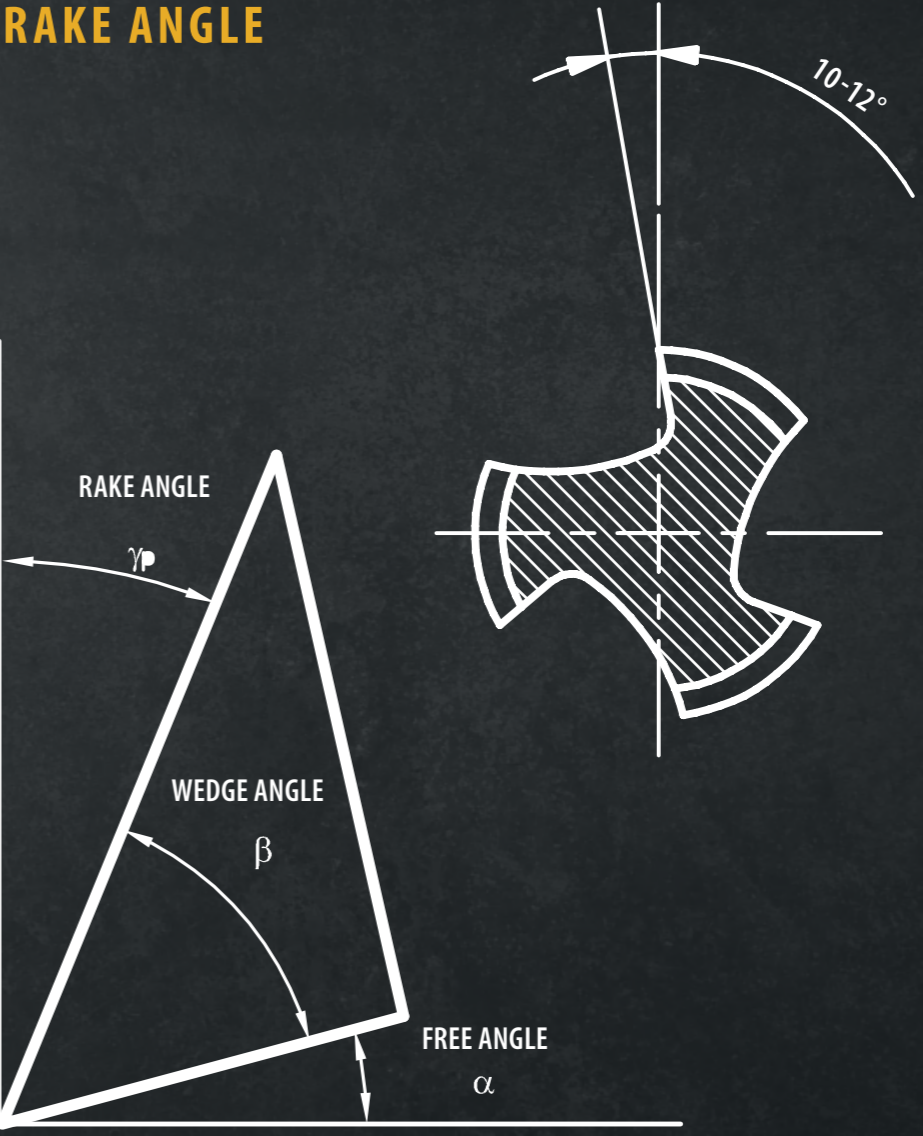
GREY  
CAST IRON



### MATERIAL GROUPS

RAW MATERIAL	TENSILE STRENGTH	ABBREV.	ID	RAKE ANGLE
Construction steels	700 – 1100	VA	Green	8 – 10
Stainless steels	700 – 1100	VA	Blue	8 – 10
Titanium/nickel steels	600 – 1200	VG	Red	10 – 12
Aluminium/copper	100 – 600	Alu	Yellow	20 – 25
Grey cast iron	800 – 900	GG	White	3 – 5

### RAKE ANGLE



## TABLE SECTION COLOUR RING MACHINE TAPS

	GREEN RING			BLUE RING		RED RING		YELLOW RING		WHITE RING	
Coating	Blank	TiN	Blank	TiN	VAP	VAP	PM TiCN	PM TiCN	TiCN	TiCN	TiCN
Chamfer	B	B	C/RSP 35°	C/RSP 35°	B	C/RSP 35°	C/LSP15°	C/RSP 15°	B	C/RSP 40°	C / E
Hole type	Through hole	Through hole	Blind hole	Blind hole	Through hole	Blind hole	Through hole	Blind hole	Through hole	Blind hole	Through/Blind
Thread length	1.1/2xd	1.1/2xd	2,5xd	2,5xd	1.1/2xd	2,5xd	3xd	2,5xd	1.1/2xd	2,5xd	2,5xd

### DIN 2184-1 (DIN 371)

Size	Pitch	Tap hole	Art.No.										
mm	mm	mm											
M 3	0,5	2,5	01061130	01063130	01065130	01067130	01069130	01071130	01073130	01075130	01077130	01079130	01059130
M 4	0,7	3,3	01061150	01063150	01065150	01067150	01069150	01071150	01073150	01075150	01077150	01079150	01059150
M 5	0,8	4,2	01061170	01063170	01065170	01067170	01069170	01071170	01073170	01075170	01077170	01079170	01059170
M 6	1,0	5,0	01061190	01063190	01065190	01067190	01069190	01071190	01073190	01075190	01077190	01079190	01059190
M 8	1,25	6,8	01061210	01063210	01065210	01067210	01069210	01071210	01073210	01075210	01077210	01079210	01059210
M 10	1,5	8,5	01061230	01063230	01065230	01067230	01069230	01071230	01073230	01075230	01077230	01079230	01059230

### DIN 2184-1 (DIN 376)

Size	Pitch	Tap hole	Art.No.										
M 12	1,75	10,2	01062250	01064250	01066250	01068250	01070250	01072250	01074250	01076250	01078250	01080250	01060250
M 14	2,0	12,0	01062260	01064260	01066260	01068260	01070260	01072260	01074260	01076260	01078260	01080260	01060260
M 16	2,0	14,0	01062270	01064270	01066270	01068270	01070270	01072270	01074270	01076270	01078270	01080270	01060270
M 18	2,5	15,5	01062280	01064280	01066280	01068280	01070280	01072280	01074280	01076280	01078280	01080280	01060280
M 20	2,5	17,5	01062290	01064290	01066290	01068290	01070290	01072290	01074290	01076290	01078290	01080290	01060290
M 22	2,5	19,5	01062300	01064300	01066300	01068300	01070300	01072300					
M 24	3,0	21,0	01062310	01064310	01066310	01068310	01070310	01072310					
M 27	3,0	24,0	01062320	01064320	01066320	01068320	01070320	01072320					
M 30	3,5	26,5	01062330	01064330	01066330	01068330	01070330	01072330					
M 33	3,5	29,5	01062340	01064340	01066340	01068340	01070340	01072340					
M 36	4,0	32,0	01062350	01064350	01066350	01068350	01070350	01072350					

## TABLE SECTION COLOUR RING MACHINE TAPS SILVER

### GSR-SILVER

Coating	Blank	TiN	AlTiN	AlCro	Blank	TiN	AlTiN	AlCro
Chamfer	B	B	B	B	RSP 35°	RSP 35°	RSP 35°	RSP 35°
Hole type	Through hole	Through hole	Through hole	Through hole	Blind hole	Blind hole	Blind hole	Blind hole
Thread length	1.1/2xd	1.1/2xd	1.1/2xd	1.1/2xd	2,5xd	2,5xd	2,5xd	2,5xd

### DIN 2184-1 (DIN 371)






Size	Pitch	Tap hole	Art.No.							
mm	mm	mm								
M 3	0,5	2,5	09000130	09004130	09008130	09012130	09002130	09006130	09010130	09014130
M 4	0,7	3,3	09000150	09004150	09008150	09012150	09002150	09006150	09010150	09014150
M 5	0,8	4,2	09000170	09004170	09008170	09012170	09002170	09006170	09010170	09014170
M 6	1,0	5,0	09000190	09004190	09008190	09012190	09002190	09006190	09010190	09014190
M 8	1,25	6,8	09000210	09004210	09008210	09012210	09002210	09006210	09010210	09014210
M 10	1,5	8,5	09000230	09004230	09008230	09012230	09002230	09006230	09010230	09014230

### DIN 2184-1 (DIN 376)

Size	Pitch	Tap hole	Art.No.							
M 12	1,75	10,2	09001250	09005250	09009250	09013250	09003250	09007250	09011250	09015250
M 14	2,0	12,0	09001260	09005260	09009260	09013260	09003260	09007260	09011260	09015260
M 16	2,0	14,0	09001270	09005270	09009270	09013270	09003270	09007270	09011270	09015270
M 18	2,5	15,5	09001280	09005280	09009280	09013280	09003280	09007280	09011280	09015280
M 20	2,5	17,5	09001290	09005290	09009290	09013290	09003290	09007290	09011290	09015290
M 22	2,5	19,5	09001300	09005300	09009300	09013300	09003300	09007300	09011300	09015300
M 24	3,0	21,0	09001310	09005310	09009310	09013310	09003310	09007310	09011310	09015310
M 27	3,0	24,0	09001320	09005320	09009320	09013320	09003320	09007320	09011320	09015320
M 30	3,5	26,5	09001330	09005330	09009330	09013330	09003330	09007330	09011330	09015330
M 33	3,5	29,5	09001340	09005340	09009340	09013340	09003340	09007340	09011340	09015340
M 36	4,0	32,0	09001350	09005350	09009350	09013350	09003350	09007350	09011350	09015350

## MATERIAL

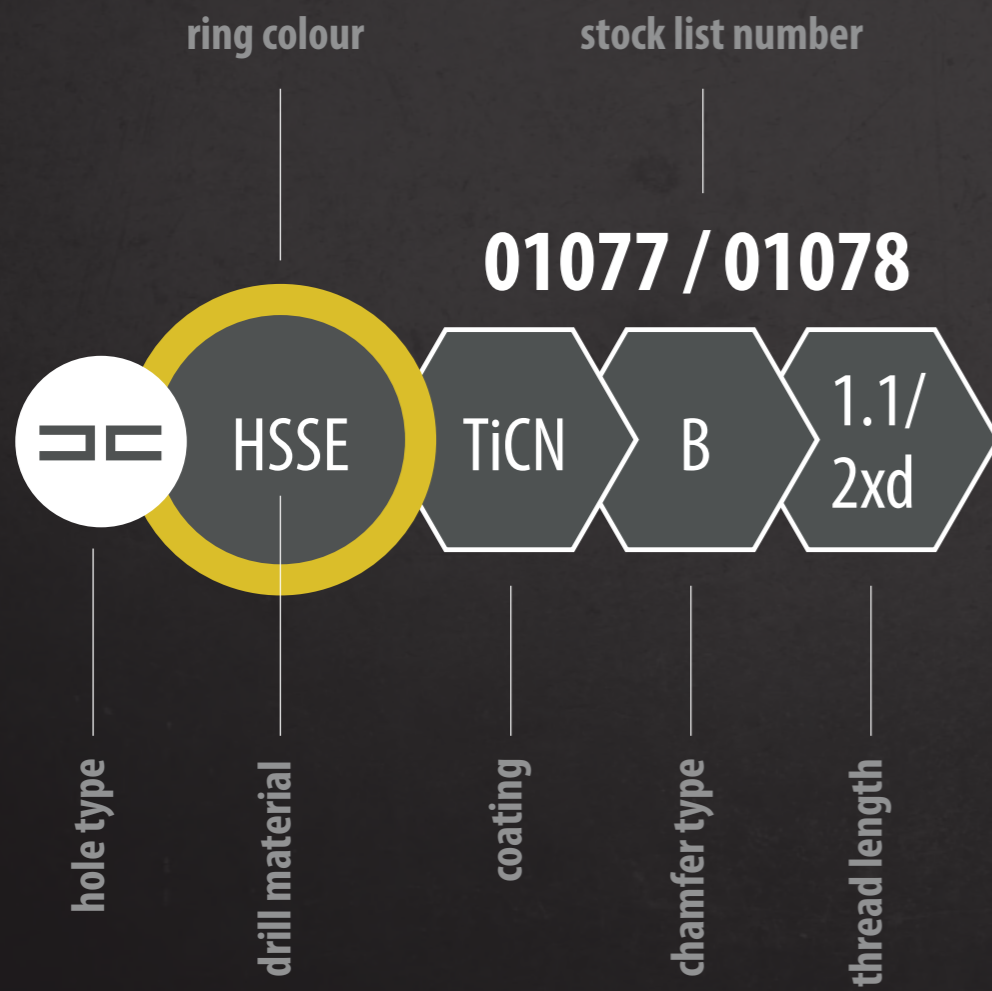
On the right, you can find a list of the lubricants to be used.

-  Cutting paste
-  Cutting oil
-  Emulsion
-  Nitrogen
-  Mould release agent

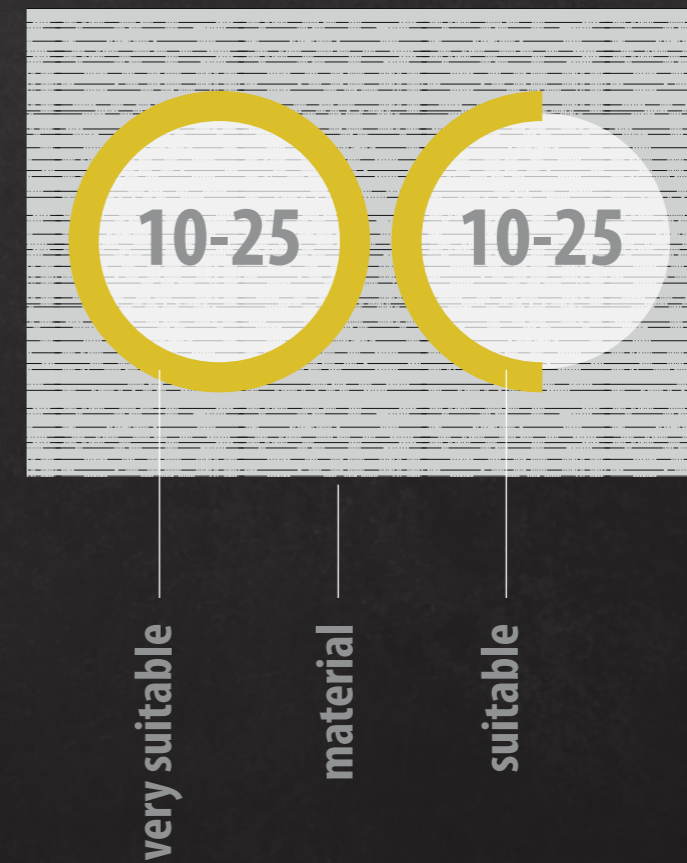
## SUMMARY TABLE

For a quick selection of a suitable machine tap, we have compiled a table that contains relevant process data (such as the cutting speed) as well as information on suitable lubricants. The criteria for the tool selection are on the one hand the type of the hole (through hole = through or blind hole = blind), as well as the type of material of the workpiece.

And this is how you use the table: First, select the desired type of material in the upper row. In the left column, the suitable taps are listed with their characteristics and their hole type shown in the graphic. In the columns next to that, you can find the corresponding cutting speeds. A full coloured circle stands for taps that are very suitable. Half coloured circles indicate that the taps are less suitable.



### cutting speed in rpm



hole type	material	coating	chamfer type	thread length	construction steels 850 N/mm <sup>2</sup>	tool steels 1000 N/mm <sup>2</sup>	free machining steels 1000 N/mm <sup>2</sup>	Q & T steels 900 N/mm <sup>2</sup>	VA steels 800 N/mm <sup>2</sup>	VA steels 1100 N/mm <sup>2</sup>	alloyed steels 1200 N/mm <sup>2</sup>	high-alloy steels up to 44 HRC	titanium	titanium alloys	nickel steels	cast materials	copper and alloys	aluminium and alloys	plastics	use in cordless screwdrivers
CC	HSSE	/	B	1.1/2xd	10-20	10-30	10-20	10-25												
CC	HSSE	TiN	B	1.1/2xd	10-30	10-30	10-20	10-20												
YF	HSSE	/	C/RSP 35°	2.5xd	10-20	10-20	5-10	5-10												
YF	HSSE	TiN	C/RSP 35°	2.5xd	10-25	10-25	10-20	10-20												
CC	HSSE	VAP	B	1.1/2xd					5-20	5-20										
YF	HSSE	VAP	C/RSP 35°	2.5xd					5-20	5-20										
CC	HSSE-PM	TiCN	C/LSP 15°	3xd							5-20	2-10	5-15	2-10	2-10					
YF	HSSE-PM	TiCN	C/RSP 15°	2.5xd							5-20	2-10	5-15	2-10	2-10		5-15			
CC	HSSE	TiCN	B	1.1/2xd	10-20		10-20													
YF	HSSE	TiCN	C/RSP 40°	2.5xd			5-15										10-25	10-25		
YF	HSSE	TiCN	C/E	2.5xd												10-20				
CC	HSSE	/	B	1.1/2xd	10-15		10-15	4-6	5-10							6-15		10-20	5-15	
CC	HSSE	TiN	B	1.1/2xd	10-15		10-15	4-6	5-10							6-15		10-20	5-15	
CC	HSSE	AlTiN	B	1.1/2xd	15-20		15-20	7-9	10-15							10-17		15-25	10-20	
CC	HSSE	AlCro	B	1.1/2xd	10-15		10-15	4-6	5-10							6-15		10-20	5-15	
YF	HSSE	/	C/RSP 35°	2.5xd	10-15		10-15	4-6	5-10							6-15		10-20	5-15	
YF	HSSE	TiN	C/RSP 35°	2.5xd	10-15		10-15	4-6	5-10							6-15		10-20	5-15	
YF	HSSE	AlTiN	C/RSP 35°	2.5xd	15-20		15-20	7-9	10-15							10-17		15-25	10-20	
YF	HSSE	AlCro	C/RSP 35°	2.5xd	15-20		15-20	7-9	10-15							6-15		10-20	5-15	