

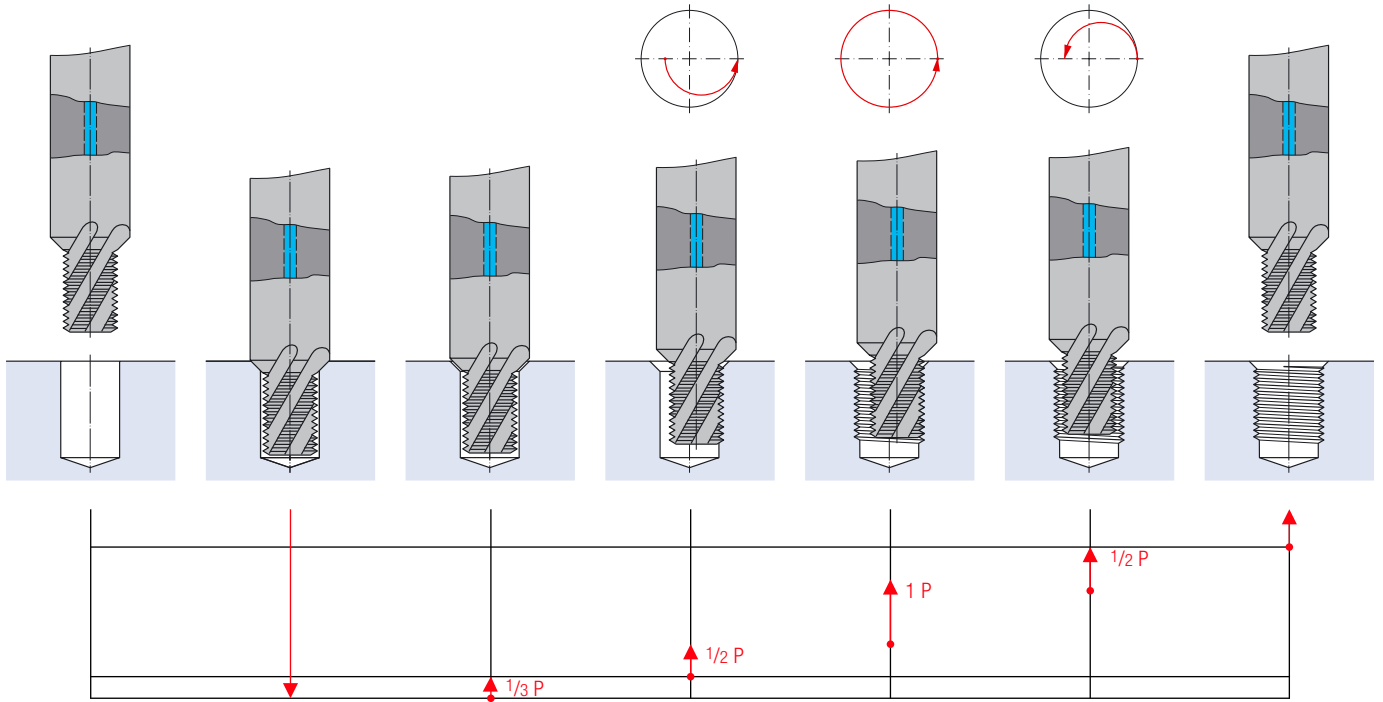
Tool description:

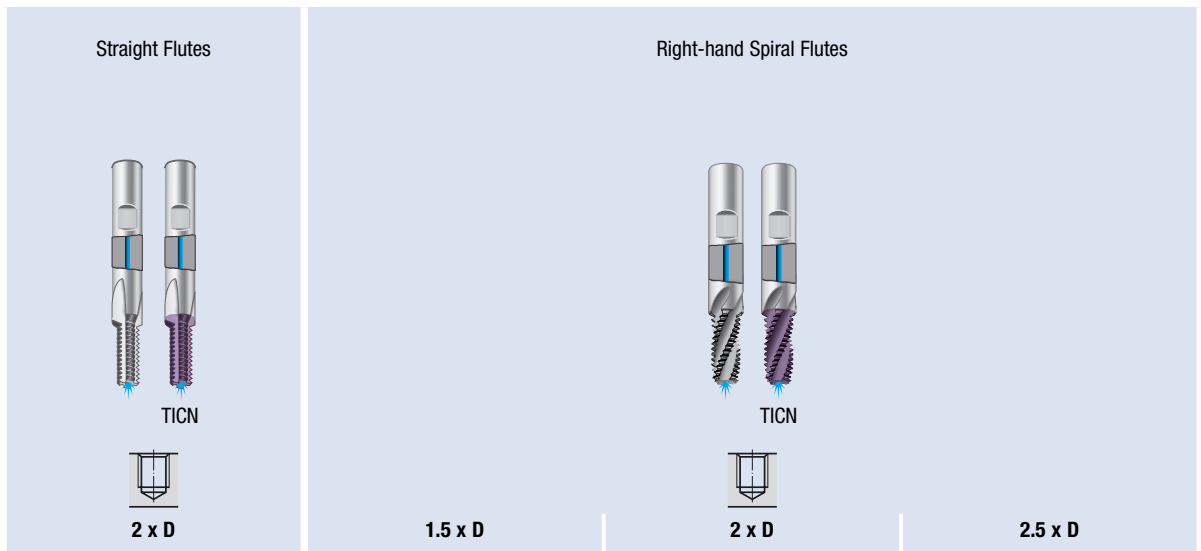
Thread mills with countersinking step for the production of internal threads. Countersinking and thread production are performed in one single work process. The preparation of the thread hole is still necessary.

Application range:

Aluminium, aluminium alloys, cast materials, low- and high-alloyed steels up to 1400 N/mm², stainless steel and titanium, as well as some synthetics.

Thread milling cycle:





		Page		
UNC		346	347 - 348	349
UNF		350	351 - 352	
M		353	354	355
MF		356	357	
LK-M	358			
G		359	360	

Possible modifications:

- face chamfer with/without cutting face
- remove incomplete thread
- recessed neck
- AZR (radially alternating tooth rows)
- IKZN (internal coolant-lubricant supply exiting in the flutes)
- coolant grooves along the shank

For a description of these modifications, see page 315

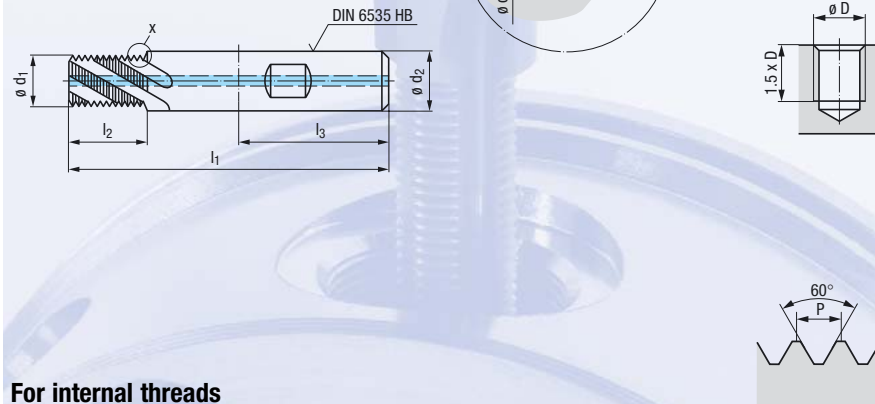
GSF

Thread Mills

UNC

Unified coarse thread UNC
ASME B1.1

30° right-hand spiral flutes

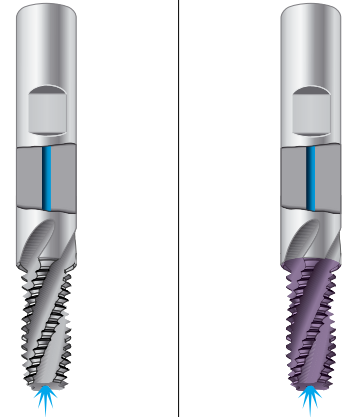


For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

1.5 x D



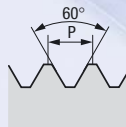
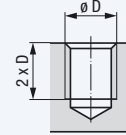
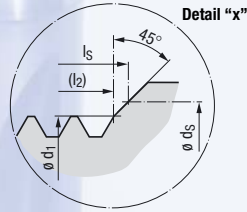
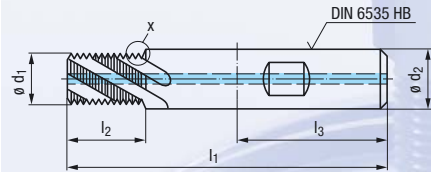
Catalog No.											G449		G450			
ϕD	T.P.I.	l_1	l_2	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	Article Number		Article Number	TICN
										inch	mm					
No. 12	24	2.441	0.353	1.417	0.163	0.228	0.384	0.315	8	3			GF322101.5008		GF322106.5008	
1/4	20	2.441	0.424	1.417	0.185	0.262	0.459	0.315	8	3			GF322101.5009	●	GF322106.5009	●
5/16	18	2.913	0.526	1.575	0.242	0.325	0.565	0.394	10	3			GF322101.5010	●	GF322106.5010	●
3/8	16	3.150	0.592	1.772	0.301	0.387	0.635	0.472	12	3			GF322101.5011	●	GF322106.5011	●
7/16	14	3.150	0.676	1.772	0.354	0.450	0.725	0.472	12	3			GF322101.5012	●	GF322106.5012	●
1/2	13	3.543	0.806	1.772	0.407	0.512	0.857	0.551	14	4			GF322101.5013	●	GF322106.5013	●
9/16	12	3.937	0.872	1.890	0.465	0.575	0.929	0.630	16	4			GF322101.5014	●	GF322106.5014	●
5/8	11	4.016	0.952	1.890	0.516	0.637	1.012	0.709	18	4			GF322101.5015	●	GF322106.5015	●
3/4	10	4.331	1.147	1.969	0.630	0.762	1.213	0.787	20	5			GF322101.5016		GF322106.5016	

Other sizes upon request

UNC

Unified coarse thread UNC
ASME B1.1

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.											G451		G452			
ϕD	T.P.I.	l_1	l_2	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	Article Number		Article Number	TiCN
				l_3	inch	mm										
No. 12	24	2.441	0.436	1.417	0.163	0.228	0.467	0.315	8	3	GF332101.5008		GF332106.5008			
1/4	20	2.441	0.524	1.417	0.185	0.262	0.559	0.315	8	3	GF332101.5009	●	GF332106.5009	●		
5/16	18	2.913	0.637	1.575	0.242	0.325	0.676	0.394	10	3	GF332101.5010	●	GF332106.5010	●		
3/8	16	3.150	0.780	1.772	0.301	0.387	0.823	0.472	12	3	GF332101.5011	●	GF332106.5011	●		
7/16	14	3.150	0.891	1.772	0.354	0.450	0.939	0.472	12	3	GF332101.5012	●	GF332106.5012	●		
1/2	13	3.543	1.036	1.772	0.407	0.512	1.088	0.551	14	4	GF332101.5013	●	GF332106.5013	●		
9/16	12	3.937	1.206	1.890	0.465	0.575	1.262	0.630	16	4	GF332101.5014	●	GF332106.5014	●		
5/8	11	4.016	1.315	1.890	0.516	0.637	1.376	0.709	18	4	GF332101.5015	●	GF332106.5015	●		
3/4	10	4.331	1.547	1.969	0.630	0.762	1.613	0.787	20	5	GF332101.5016		GF332106.5016			

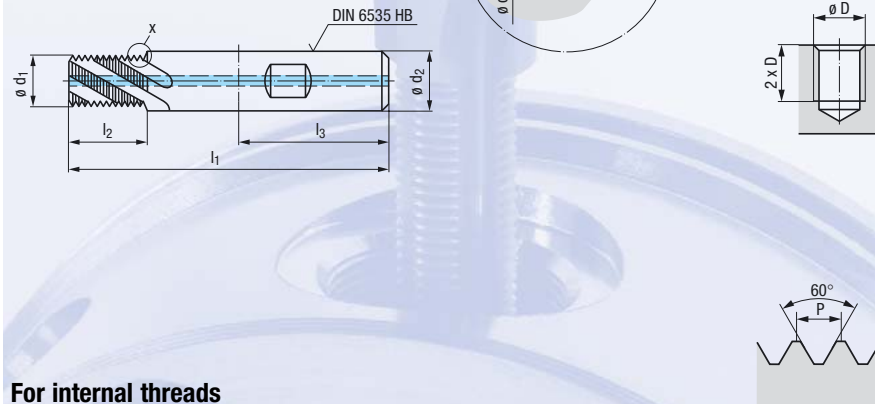
Other sizes upon request

GSF

UNC

Unified coarse thread UNC
ASME B1.1

15° right-hand spiral flutes

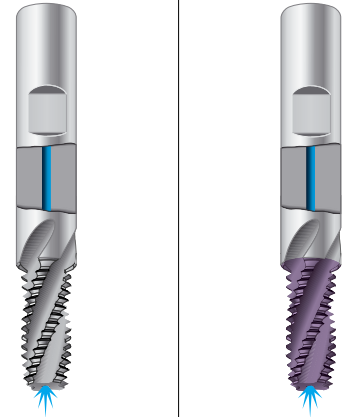


For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



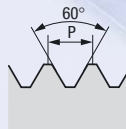
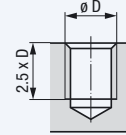
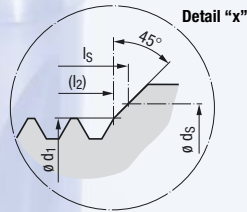
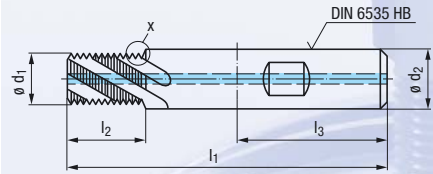
Catalog No.											G606		G607			
ϕD	T.P.I.	l_1	l_2	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	Article Number		Article Number	TICN
										inch	mm					
No. 10	24	2.165	0.394	1.417	0.136	0.202	0.427	0.236	6	3			GF335101.5007	●	GF335106.5007	●
No. 12	24	2.441	0.436	1.417	0.163	0.228	0.467	0.315	8	3			GF335101.5008		GF335106.5008	
1/4	20	2.441	0.524	1.417	0.185	0.262	0.559	0.315	8	3			GF335101.5009	●	GF335106.5009	●
5/16	18	2.913	0.637	1.575	0.242	0.325	0.676	0.394	10	3			GF335101.5010	●	GF335106.5010	●
3/8	16	3.150	0.780	1.772	0.301	0.387	0.823	0.472	12	3			GF335101.5011	●	GF335106.5011	●
7/16	14	3.150	0.891	1.772	0.354	0.450	0.939	0.472	12	3			GF335101.5012	●	GF335106.5012	●
1/2	13	3.543	1.036	1.772	0.407	0.512	1.088	0.551	14	4			GF335101.5013	●	GF335106.5013	●
9/16	12	3.937	1.206	1.890	0.465	0.575	1.262	0.630	16	4			GF335101.5014	●	GF335106.5014	●
5/8	11	4.134	1.315	1.890	0.516	0.637	1.376	0.709	18	4			GF335101.5015	●	GF335106.5015	●
3/4	10	4.134	1.547	1.969	0.630	0.762	1.613	0.787	20	5			GF335101.5016		GF335106.5016	

Other sizes upon request

UNC

Unified coarse thread UNC
ASME B1.1

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2.5 x D



Catalog No.

G453

G454

θD	T.P.I.	l_1	l_2	inch			l_s	θd_2		Teeth	G453		G454	
				θd_1	θd_s	l_3		inch	mm		Article Number		Article Number	TICN
3/8	16	3.346	0.967	1.772	0.301	0.387	1.011	0.472	12	3	GF342101.5011	●	GF342106.5011	●
7/16	14	3.346	1.105	1.772	0.354	0.450	1.154	0.472	12	3	GF342101.5012	●	GF342106.5012	●
1/2	13	3.780	1.267	1.772	0.407	0.512	1.319	0.551	14	4	GF342101.5013	●	GF342106.5013	●
9/16	12	4.213	1.456	1.890	0.465	0.575	1.512	0.630	16	4	GF342101.5014	●	GF342106.5014	●
5/8	11	4.331	1.588	1.890	0.516	0.637	1.648	0.709	18	4	GF342101.5015	●	GF342106.5015	●
3/4	10	4.921	1.947	1.969	0.630	0.762	2.013	0.787	20	5	GF342101.5016	●	GF342106.5016	●

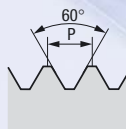
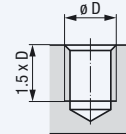
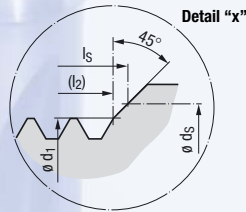
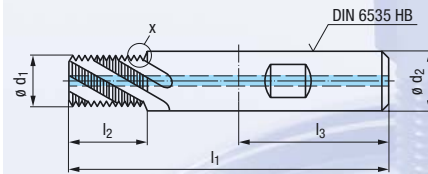
Other sizes upon request

GSF

UNF

Unified fine thread UNF
ASME B1.1

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

1.5 x D



Catalog No.

G455

G456

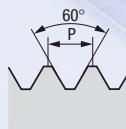
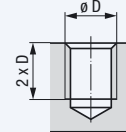
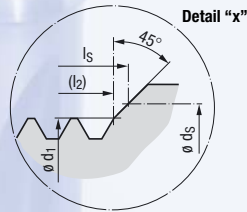
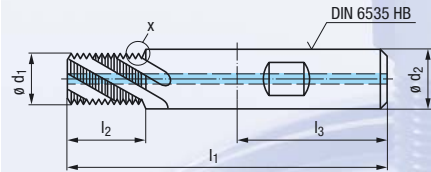
ϕD	T.P.I.	l_1	l_2	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	G455		G456	
				l_3	inch	mm				Article Number			Article Number	TICN		
No. 10	32	2.165	0.296	1.417	0.150	0.202	0.321	0.236	6	3	GF322101.5041	●	GF322106.5041	●		
No. 12	28	2.441	0.338	1.417	0.169	0.228	0.366	0.315	8	3	GF322101.5042		GF322106.5042			
1/4	28	2.441	0.409	1.417	0.203	0.262	0.437	0.315	8	3	GF322101.5043	●	GF322106.5043	●		
5/16	24	2.913	0.478	1.575	0.260	0.325	0.509	0.394	10	3	GF322101.5044	●	GF322106.5044	●		
3/8	24	3.150	0.561	1.772	0.323	0.387	0.593	0.472	12	3	GF322101.5045	●	GF322106.5045	●		
7/16	20	3.150	0.674	1.772	0.376	0.450	0.711	0.472	12	3	GF322101.5046	●	GF322106.5046	●		
1/2	20	3.543	0.774	1.772	0.437	0.512	0.811	0.551	14	4	GF322101.5047	●	GF322106.5047	●		
9/16	18	3.937	0.859	1.890	0.492	0.575	0.901	0.630	16	4	GF322101.5048	●	GF322106.5048	●		
5/8	18	4.016	0.970	1.890	0.555	0.637	1.013	0.709	18	4	GF322101.5049	●	GF322106.5049	●		
3/4	16	4.331	1.155	1.969	0.669	0.762	1.202	0.787	20	5	GF322101.5050		GF322106.5050			

Other sizes upon request

UNF

Unified fine thread UNF
ASME B1.1

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.											G457		G458			
ϕD	T.P.I.	l_1	l_2	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	Article Number		Article Number	TICN
									inch	mm						
No. 10	32	2.165	0.390	1.417	0.150	0.202	0.415	0.236	6	3		GF332101.5041	●	GF332106.5041	●	
No. 12	28	2.441	0.445	1.417	0.169	0.228	0.473	0.315	8	3		GF332101.5042		GF332106.5042		
1/4	28	2.441	0.517	1.417	0.203	0.262	0.544	0.315	8	3		GF332101.5043		GF332106.5043		
5/16	24	2.913	0.644	1.575	0.260	0.325	0.676	0.394	10	3		GF332101.5044	●	GF332106.5044	●	
3/8	24	3.150	0.769	1.772	0.323	0.387	0.802	0.472	12	3		GF332101.5045	●	GF332106.5045	●	
7/16	20	3.150	0.874	1.772	0.376	0.450	0.911	0.472	12	3		GF332101.5046	●	GF332106.5046	●	
1/2	20	3.543	1.024	1.772	0.437	0.512	1.061	0.551	14	4		GF332101.5047	●	GF332106.5047	●	
9/16	18	3.937	1.137	1.890	0.492	0.575	1.179	0.630	16	4		GF332101.5048	●	GF332106.5048	●	
5/8	18	4.016	1.304	1.890	0.555	0.637	1.346	0.709	18	4		GF332101.5049	●	GF332106.5049	●	
3/4	16	4.331	1.530	1.969	0.669	0.762	1.577	0.787	20	5		GF332101.5050		GF332106.5050		

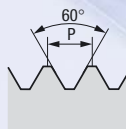
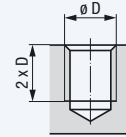
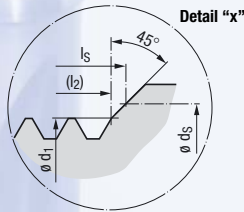
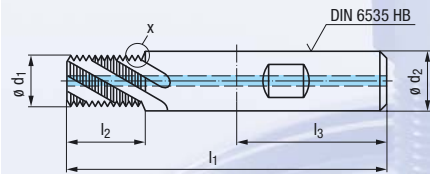
Other sizes upon request

GSF

UNF

Unified fine thread UNF
ASME B1.1

15° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.

G602

G603

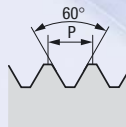
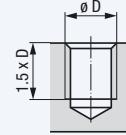
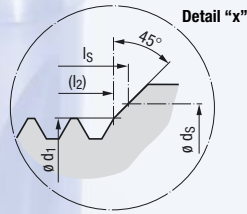
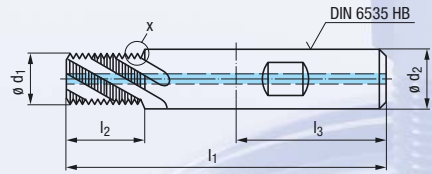
No.	T.P.I.	inch			ϕd_1	ϕd_s	l_s	ϕd_2		Teeth	Article Number		Article Number	TiCN
		l_1	l_2	l_3				inch	mm					
No. 10	32	2.165	0.390	1.417	0.150	0.202	0.415	0.236	6	3	GF335101.5041	●	GF335106.5041	●
No. 12	28	2.441	0.445	1.417	0.169	0.228	0.473	0.315	8	3	GF335101.5042		GF335106.5042	
1/4	28	2.441	0.517	1.417	0.203	0.262	0.544	0.315	8	3	GF335101.5043	●	GF335106.5043	●
5/16	24	2.913	0.644	1.575	0.260	0.325	0.676	0.394	10	3	GF335101.5044	●	GF335106.5044	●
3/8	24	3.150	0.769	1.772	0.323	0.387	0.802	0.472	12	3	GF335101.5045	●	GF335106.5045	●
7/16	20	3.150	0.874	1.772	0.376	0.450	0.911	0.472	12	3	GF335101.5046	●	GF335106.5046	●
1/2	20	3.543	1.024	1.772	0.437	0.512	1.061	0.551	14	4	GF335101.5047	●	GF335106.5047	●
9/16	18	3.937	1.137	1.890	0.492	0.575	1.179	0.630	16	4	GF335101.5048	●	GF335106.5048	●
5/8	18	4.134	1.304	1.890	0.555	0.637	1.346	0.709	18	4	GF335101.5049	●	GF335106.5049	●
3/4	16	4.134	1.530	1.969	0.669	0.762	1.577	0.787	20	5	GF335101.5050		GF335106.5050	

Other sizes upon request

M

ISO Metric coarse thread DIN 13

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

1.5 x D



Catalog No.

G385

G388

θD	P mm	l_1	l_2	mm			θd_1	θd_s	l_s	θd_2	Teeth	G385		G388	
				l_3	θd_1	θd_s						Article Number		Article Number	TICN
M 5	0.8	55	7.55	36	4.0	5.3	8.15	6	3	GF322101.0050	●	GF322106.0050	●		
6	1.0	62	9.40	36	4.8	6.3	10.15	8	3	GF322101.0060	●	GF322106.0060	●		
8	1.25	74	13.05	40	6.5	8.3	13.95	10	3	GF322101.0080	●	GF322106.0080	●		
10	1.5	80	15.65	45	8.2	10.3	16.70	12	3	GF322101.0100	●	GF322106.0100	●		
12	1.75	90	18.25	45	9.9	12.3	19.45	14	4	GF322101.0112	●	GF322106.0112	●		
14	2.0	100	22.85	48	11.6	14.3	24.20	16	4	GF322101.0114	●	GF322106.0114	●		
16	2.0	102	24.85	48	13.6	16.3	26.20	18	4	GF322101.0116	●	GF322106.0116	●		

Other sizes upon request

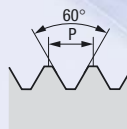
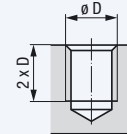
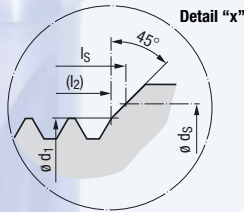
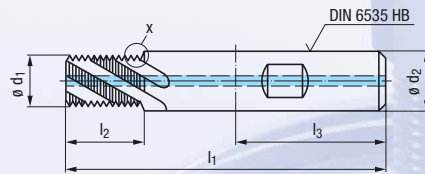
GSF

Thread Mills

M

ISO Metric coarse thread DIN 13

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.

G391

G394

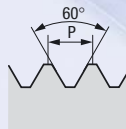
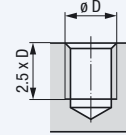
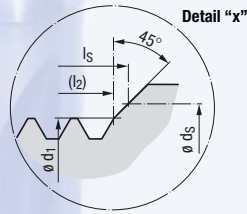
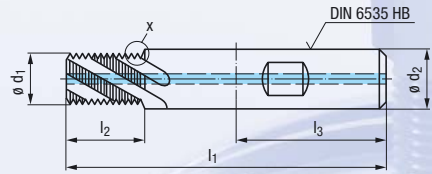
ϕD	P mm	l_1	l_2	mm			ϕd_1	ϕd_s	l_s	ϕd_2	Teeth	G391		G394	
				l_3	ϕd_1	ϕd_s						Article Number		Article Number	TICN
M 5	0.8	55	10.75	36	4.0	5.3	11.35	6	3	GF332101.0050	●	GF332106.0050	●		
6	1.0	62	12.40	36	4.8	6.3	13.15	8	3	GF332101.0060	●	GF332106.0060	●		
8	1.25	74	16.80	40	6.5	8.3	17.65	10	3	GF332101.0080	●	GF332106.0080	●		
10	1.5	80	20.15	45	8.2	10.3	21.20	12	3	GF332101.0100	●	GF332106.0100	●		
12	1.75	90	25.25	45	9.9	12.3	26.45	14	4	GF332101.0112	●	GF332106.0112	●		
14	2.0	100	28.85	48	11.6	14.3	30.20	16	4	GF332101.0114	●	GF332106.0114	●		
16	2.0	102	32.85	48	13.6	16.3	34.20	18	4	GF332101.0116	●	GF332106.0116	●		

Other sizes upon request

M

ISO Metric coarse thread DIN 13

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2.5 x D



Catalog No.

G493

G496

θD	P mm	l_1	l_2	mm			θd_1	θd_s	l_s	θd_2	Teeth	G493		G496	
				l_3	θd_1	θd_s						Article Number		Article Number	TICN
M 5	0.8	58	13.15	36	4.0	5.3	13.75	6	3	GF342101.0050		GF342106.0050			
6	1.0	65	15.40	36	4.8	6.3	16.15	8	3	GF342101.0060	●	GF342106.0060	●		
8	1.25	78	20.55	40	6.5	8.3	21.45	10	3	GF342101.0080	●	GF342106.0080	●		
10	1.5	85	26.15	45	8.2	10.3	27.20	12	3	GF342101.0100	●	GF342106.0100	●		
12	1.75	95	30.50	45	9.9	12.3	31.70	14	4	GF342101.0112	●	GF342106.0112	●		
14	2.0	110	36.85	48	11.6	14.3	38.20	16	4	GF342101.0114		GF342106.0114			
16	2.0	110	40.85	48	13.6	16.3	42.20	18	4	GF342101.0116	●	GF342106.0116	●		

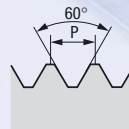
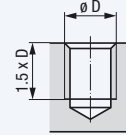
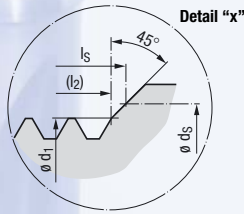
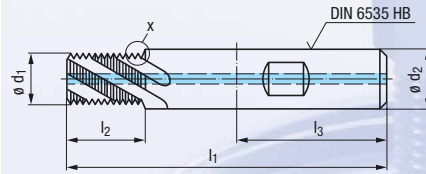
Other sizes upon request

GSF

MF

ISO Metric fine thread DIN 13

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

1.5 x D



Catalog No.

G397

G400

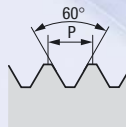
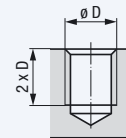
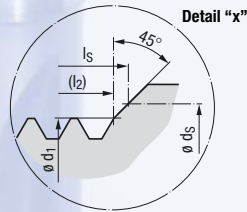
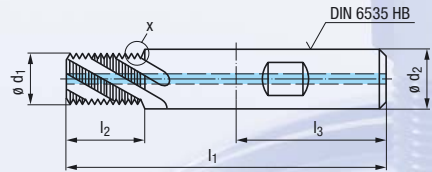
ϕD	P mm	l_1	l_2	mm			ϕd_1	ϕd_s	l_s	ϕd_2	Teeth	G397		G400	
				ϕd_1	ϕd_s	l_s						Article Number		Article Number	TICN
M 6 x	0.75	62	9.30	36	5.0	6.3	9.95	8	3	GF322101.0229	●	GF322106.0229	●		
8 x	1.0	74	12.40	40	6.7	8.3	13.20	10	3	GF322101.0251	●	GF322106.0251	●		
10 x	1.0	80	15.40	45	8.7	10.3	16.20	12	3	GF322101.0276	●	GF322106.0276	●		
12 x	1.0	90	18.40	45	10.6	12.3	19.25	14	4	GF322101.0301	●	GF322106.0301	●		
12 x	1.5	90	18.65	45	10.1	12.3	19.70	14	4	GF322101.0303	●	GF322106.0303	●		
14 x	1.5	100	21.65	48	12.1	14.3	22.75	16	4	GF322101.0331	●	GF322106.0331	●		
16 x	1.5	102	24.65	48	14.0	16.3	25.75	18	4	GF322101.0359	●	GF322106.0359	●		

Other sizes upon request

MF

ISO Metric fine thread DIN 13

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.

G403

G406

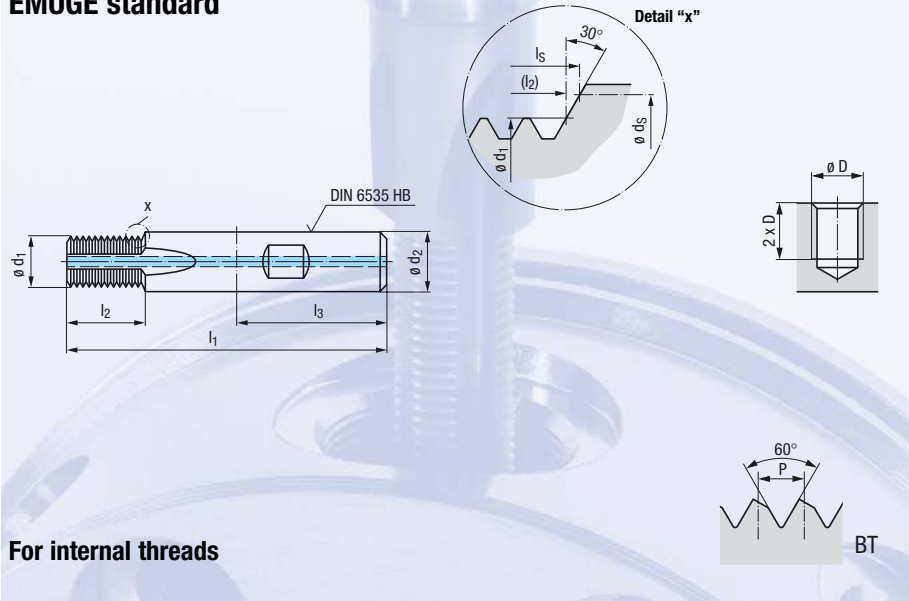
$\varnothing D$	P mm	l_1	l_2	mm			$\varnothing d_1$	$\varnothing d_s$	l_s	$\varnothing d_2$	Teeth	G403		G406	
				l_3								Article Number		Article Number	TICN
M 6 x 0.75		62	12.30	36	5.0	6.3	12.95	8	3	GF332101.0229	●	GF332106.0229	●		
8 x 1.0		74	16.40	40	6.7	8.3	17.20	10	3	GF332101.0251	●	GF332106.0251	●		
10 x 1.0		80	20.40	45	8.7	10.3	21.20	12	3	GF332101.0276	●	GF332106.0276	●		
12 x 1.0		90	24.40	45	10.6	12.3	25.25	14	4	GF332101.0301	●	GF332106.0301	●		
12 x 1.5		90	24.65	45	10.1	12.3	25.70	14	4	GF332101.0303	●	GF332106.0303	●		
14 x 1.5		100	29.15	48	12.1	14.3	30.25	16	4	GF332101.0331	●	GF332106.0331	●		
16 x 1.5		102	32.15	48	14.0	16.3	33.25	18	4	GF332101.0359	●	GF332106.0359	●		

Other sizes upon request

GSF

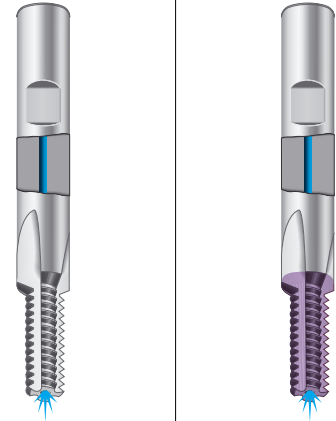
LK-M

Metric SELF-LOCK coarse thread
EMUGE standard



Metric Shank
With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.											G685		G686	
$\varnothing D$	P mm	l_1	l_2	mm l_3	$\varnothing d_1$	$\varnothing d_s$	l_s	$\varnothing d_2$	Teeth	Article Number		Article Number	TICN	
LK-M 5	0.8	55	10.8	36	4.0	5.3	11.15	6	3	GF333101.1050	●	GF333106.1050	●	
6	1.0	62	12.5	36	4.8	6.3	12.90	8	3	GF333101.1052	●	GF333106.1052	●	
8	1.25	74	16.9	40	6.5	8.3	17.40	10	3	GF333101.1054	●	GF333106.1054	●	
10	1.5	80	20.3	45	8.2	10.3	20.80	12	3	GF333101.1056	●	GF333106.1056	●	
12	1.75	90	25.4	45	9.9	12.3	26.00	14	4	GF333101.1058	●	GF333106.1058	●	

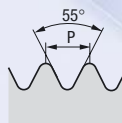
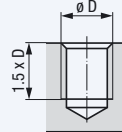
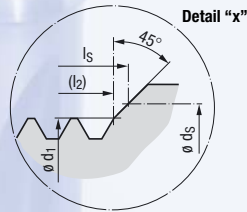
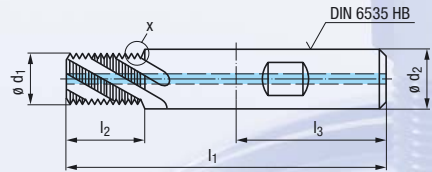
Other sizes upon request

GSF

G

**Whitworth pipe thread
DIN EN ISO 228**

30° right-hand spiral flutes



For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

1.5 x D



Catalog No.

G588

G591

$\varnothing D$	T.P.I.	l_1	l_2	inch			$\varnothing d_1$	$\varnothing d_s$	l_s	$\varnothing d_2$		Teeth	G588		G591	
				inch	mm	Article Number				TICN	Article Number		TICN			
G 1/8	28	3.150	0.585	1.772	0.323	0.394	0.620	0.472	12	3	GF322101.4035	●	GF322106.4035	●		
1/4	19	3.937	0.810	1.890	0.433	0.531	0.859	0.630	16	4	GF322101.4036	●	GF322106.4036	●		
3/8	19	4.016	1.020	1.890	0.571	0.669	1.070	0.709	18	4	GF322101.4037	●	GF322106.4037	●		

Other sizes upon request

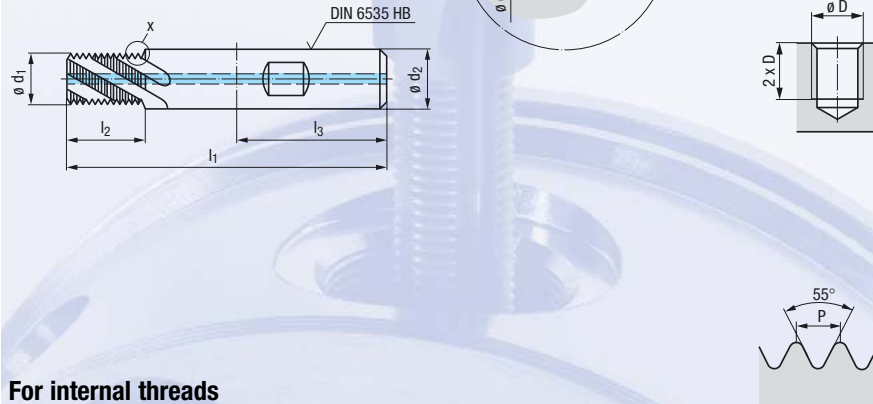
GSF

Thread Mills

G

**Whitworth pipe thread
DIN EN ISO 228**

30° right-hand spiral flutes

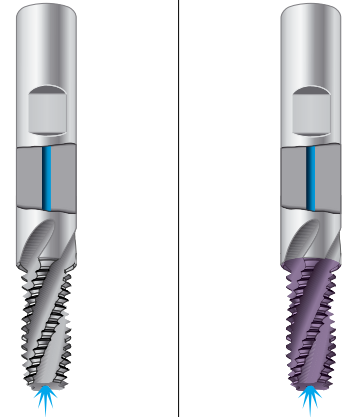


For internal threads

Metric Shank

With internal coolant-lubricant supply (IKZ)

2 x D



Catalog No.

G594

G597

$\varnothing D$	T.P.I.	l_1	l_2	inch			$\varnothing d_1$	$\varnothing d_s$	l_s	$\varnothing d_2$		Teeth	G594		G597	
				inch	mm	Article Number				TICN	Article Number		TICN			
G 1/8	28	3.150	0.782	1.772	0.323	0.394	0.817	0.472	12	3	GF332101.4035	●	GF332106.4035	●		
1/4	19	3.937	1.073	1.890	0.433	0.531	1.122	0.630	16	4	GF332101.4036	●	GF332106.4036	●		
3/8	19	4.016	1.336	1.890	0.571	0.669	1.385	0.709	18	4	GF332101.4037	●	GF332106.4037	●		

Other sizes upon request

