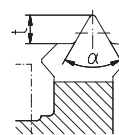
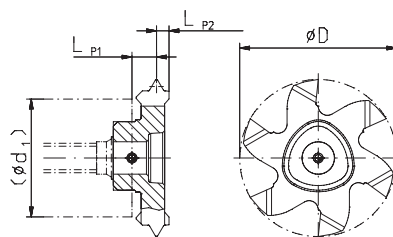
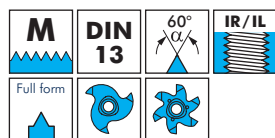


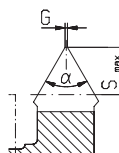
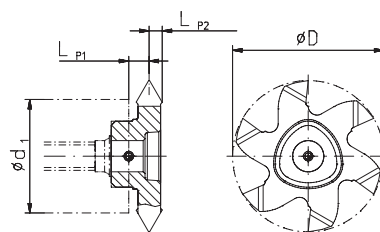
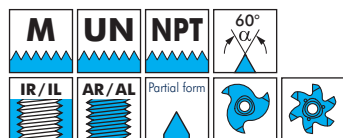
Thread Milling

- Insert holder see page 31-33
- Cutting data see page 189



Typ		Pitch mm	D mm	LP1 mm	LP2 mm	f mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,00	9,6	2,65	0,80	0,572		3	171875
	P1210	1,50	9,6	2,50	0,95	0,875		3	171876
	P1210	1,75	9,6	2,25	1,20	1,010	only M12	3	175479
	P1211	2,00	10,5	2,25	1,20	1,127	only M14, M16	3	160857
	P1211	2,00	10,5	2,25	1,20	1,157		3	171877
P16	P1616	1,00	16,0	2,80	1,03	0,572		6	107240
	P1616	1,50	16,0	2,55	1,28	0,864		6	142569
	P1616	2,00	16,0	2,05	1,78	1,159		6	142570
	P1616	2,50	16,0	2,05	1,78	1,444		6	142543
	P1616	2,50	16,0	2,05	0,78	1,444	only M20	6	142534
P20	P1616	3,00	16,0	3,05	1,78	1,702		6	142575
	P2020	1,50	20,0	2,55	1,28	0,875		6	168683
	P2020	2,00	20,0	2,55	1,28	1,157		6	168684
P25	P2020	3,00	20,0	2,15	1,68	1,745	only M24	6	168685
	P2526	1,50	26,0	1,85	1,98	0,864		6	142617
	P2526	2,00	26,0	2,55	1,28	1,159		6	142644
	P2526	3,00	26,0	2,95	0,88	1,728		6	142599
	P2524	3,50	24,0	2,75	1,08	2,023	only M30	6	142671
	P2526	3,50	26,0	2,90	1,93	2,023		6	142623
	P2526	4,00	26,0	2,90	1,93	2,262		6	142624
	P2526	4,00	26,0	2,65	2,18	2,262	only M36	6	169675
	P2526	4,50	26,0	2,65	2,18	2,602		6	142638
P2526	5,00	26,0	3,85	3,48	2,887		6	107275	

i External thread according to DIN 13 on request

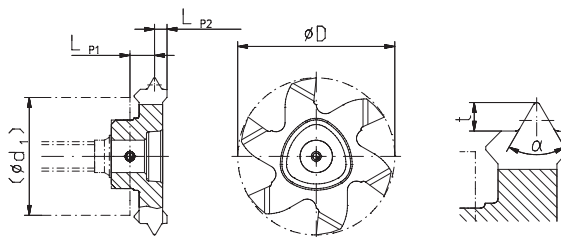
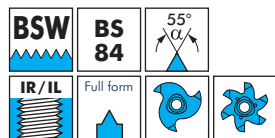


Type		Pitch mm	D mm	LP1 mm	LP2 mm	G mm	Number of teeth	Order No. TINAMATIC
P12	P1212	1-3	11,7	2,125	1,33	0,10	3	171911
P16	P1616	1-4*	16,0	2,70	1,68	0,10	6	142580
	P1616	2,5-4*	16,0	2,70	1,68	0,25	6	142544
	P1618	1-3	17,7	2,70	1,05	0,10	6	171954
P20	P2020	1-3	20,0	2,15	1,68	0,10	6	168686
	P2022	1-2	21,7	4,15	1,00	0,10	6	171972
	P2022	2-4	21,7	2,95	1,80	0,15	6	171973
P25	P2526	1-3	26,0	2,75	2,08	0,10	6	142647
	P2526	2,5-5	26,0	2,65	2,18	0,25	6	142592
	P2526	3,5-6	26,0	3,85	0,70	0,40	6	175936

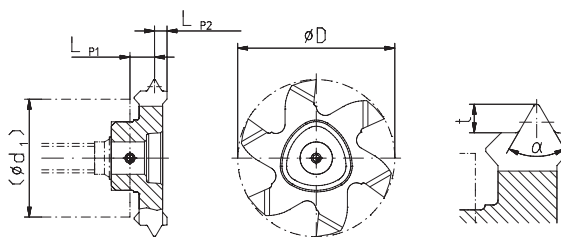
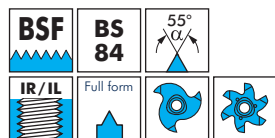
* Not suited for pitch 4,0 mm with the cutters 123588 and 123590

Thread Milling

- Insert holder see page 31-33
- Cutting data see page 189
- Conditional deliverable
- Further sizes on request



Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	2,117	12	10	2,25	1,1	1,371 BSW 9/16"	3	162119 NEW
	P1210	2,309	11	10,4	2,15	1,5	1,494 BSW 5/8" + 11/16"	3	160998 NEW
	P1212	2,540	10	11,7	2,2	1,4	1,728 BSW 3/4" + 13/16"	3	160663 NEW
P16	P1616	2,822	9	16	2,1	1,675	1,622 BSW 7/8" + 15/16"	6	160940 NEW
	P1616	3,175	8	16	2,1	1,675	1,83 BSW 1"	6	161053 NEW
	P1616*	3,629	7	16	2,65	2,125	2,098 BSW 1 1/8" + 1 1/4"	6	161166 NEW
	P1616*	4,233	6	16	3,175	2,7	2,455 BSW 1 3/8" + 1 1/2"	6	162371 NEW
P20	P2020	3,629	7	20	2,7	2,225	2,098 BSW 1 1/8" + 1 1/4"	6	160959 NEW
	P2020**	4,233	6	20	3,15	2,675	2,455 BSW 1 3/8" + 1 1/2"	6	161270 NEW
P25	P2524	4,233	6	24	4,4	2,675	2,455 BSW 1 3/8"	6	161466 NEW
	P2524	4,233	6	24	4,4	2,675	2,455 BSW 1 1/2"	6	162615 NEW
	P2524	5,080	5	24	3,9	2,875	2,955 BSW 1 5/8" + 1 3/4"	6	161100 NEW



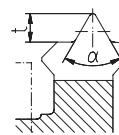
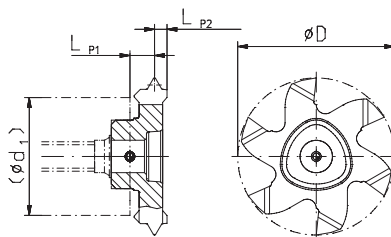
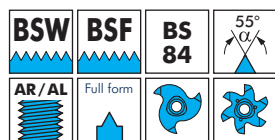
Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,814	14	9,6	2,25	1,1	1,177 BSF 5/8" + 11/16"	3	160930 NEW
	P1210	2,117	12	10	2,25	1,1	1,371 BSF 3/4" + 13/16"	3	161623 NEW
	P1210	2,309	11	10,4	2,15	1,5	1,494 BSF 7/8"	3	160951 NEW
	P1212	2,540	10	11,7	2,20	1,4	1,728 BSF 1"	3	160663 NEW
P16	P1616	2,822	9	16	2,10	1,675	1,622 BSF 1 1/8" + 1 1/4"	6	160989 NEW
	P1616	3,175	8	16	2,10	1,675	1,83 BSF 1 3/8" - 1 5/8"	6	162077 NEW
	P1616*	3,629	7	16	2,65	2,125	2,098 BSF 1 3/4" + 2"	6	160960 NEW
	P1616*	4,233	6	16	3,175	2,7	2,455 BSF 2 1/4" - 2 3/4"	6	162305 NEW
P20	P2020	3,175	8	20	2,15	1,675	1,83 BSF 1 3/8" - 1 5/8"	6	161089 NEW
	P2020	3,629	7	20	2,7	2,225	2,098 BSF 1 3/4" + 2"	6	161341 NEW
	P2020**	4,233	6	20	3,15	2,675	2,455 BSF 2 1/4" - 2 3/4"	6	160942 NEW
P25	P2524	3,175	8	24	2,1	1,675	1,83 BSF 1 3/8" - 1 5/8"	6	162051 NEW
	P2524	3,629	7	24	2,65	2,175	2,098 BSF 1 3/4" + 2"	6	161436 NEW
	P2524	4,233	6	24	4,4	2,675	2,455 BSF 2 1/4" - 2 3/4"	6	161887 NEW
	P2524	5,080	5	24	3,9	2,875	2,955 BSF 3" - 3 1/4"	6	161250 NEW



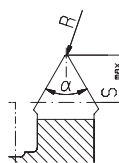
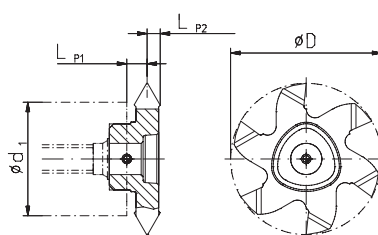
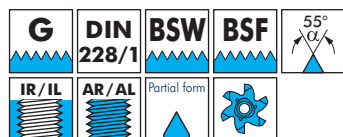
External thread BSW/BSF see next page

Thread Milling

- Insert holder see page 31-33
- Cutting data see page 189
- Conditional deliverable
- Further sizes on request



Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,814	14	11,7	2,30	1,1	1,178 BSW/BSF - 14 Gg	3	160943 NEW
	P1210	2,117	12	11,7	2,25	1,4	1,374 BSW/BSF - 12 Gg	3	160967 NEW
	P1210	2,309	11	11,7	2,25	1,4	1,498 BSW/BSF - 11 Gg	3	161112 NEW
	P1212	2,540	10	11,7	2,25	1,4	1,646 BSW/BSF - 10 Gg	3	161184 NEW
P16	P1616	1,814	14	16	2,15	1,675	1,178 BSW/BSF - 14 Gg	6	142576
	P1616	2,117	12	16	2,15	1,675	1,374 BSW/BSF - 12 Gg	6	160947 NEW
	P1616	2,309	11	16	2,75	2,075	1,498 BSW/BSF - 11 Gg	6	142549
	P1616	2,540	10	16	2,15	1,675	1,646 BSW/BSF - 10 Gg	6	167014
	P1616	2,822	9	16	2,15	1,675	1,829 BSW/BSF - 9 Gg	6	160977 NEW
	P1616*	3,175	8	16	2,75	2,075	2,056 BSW/BSF - 8 Gg	6	161744 NEW
	P1616*	3,629	7	16	3,15	2,225	2,348 BSW/BSF - 7 Gg	6	162097 NEW
	P1616*	4,233	6	16	3,15	2,225	2,737 BSW/BSF - 6 Gg	6	162650 NEW
	P2020	1,814	14	20	2,10	1,725	1,178 BSW/BSF - 14 Gg	6	168688
	P2020	2,117	12	20	2,10	1,725	1,374 BSW/BSF - 12 Gg	6	160963 NEW
P20	P2020	2,309	11	20	2,10	1,725	1,498 BSW/BSF - 11 Gg	6	168687
	P2020	2,540	10	20	2,10	1,725	1,646 BSW/BSF - 10 Gg	6	160984 NEW
	P2020	2,822	9	20	2,10	1,725	1,829 BSW/BSF - 9 Gg	6	160997 NEW
	P2020**	3,175	8	20	2,65	2,175	2,056 BSW/BSF - 8 Gg	6	161113 NEW
	P2020**	3,629	7	20	2,65	2,175	2,348 BSW/BSF - 7 Gg	6	161259 NEW
	P2020**	4,233	6	20	3,15	2,675	2,737 BSW/BSF - 6 Gg	6	161325 NEW
	P2526	2,309	11	26	2,75	2,075	1,478 BSW/BSF - 11 Gg	6	142600
P25	P2526	3,175	8	26	2,60	2,175	2,056 BSW/BSF - 8 Gg	6	160949 NEW
	P2526	3,629	7	26	2,60	2,175	2,348 BSW/BSF - 7 Gg	6	160950 NEW
	P2524	4,233	6	24	4,40	2,675	2,737 BSW/BSF - 6 Gg	6	161130 NEW
	P2524 ***	5,080	5	24	4,40	2,675	3,281 BSW/BSF - 5 Gg	6	161400 NEW



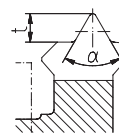
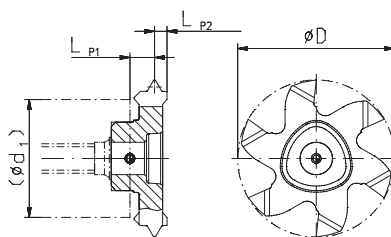
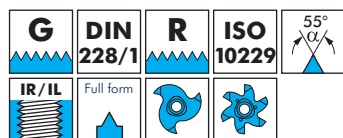
										Order No.
Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	r mm	S _{max.} mm	Number of teeth		TINAMATIC
P16	P1616	1,814-3,175	14-8	16	2,75	1,625	0,35	2,5	6	173906
P25	P2526	3,175-6,35	8-4	26	2,65	2,175	0,6	2,8	6	177427

i Taper pipe thread BSPT according to BS.84 on request

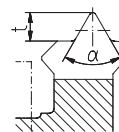
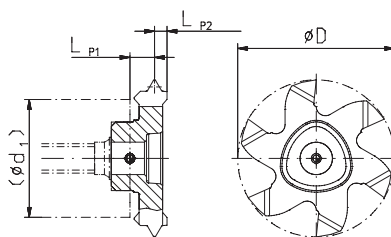
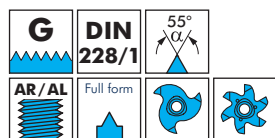
* Not suited for cutters 123588 and 123590
 ** Not suited for cutter 174314
 *** Not suited for cutter 123613

Thread Milling

- Insert holder see page 31-33
- Cutting data see page 189
- Conditional deliverable
- Further sizes on request



Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,337	19	9,6	2,25	1,2	0,871	G 1/4"	3
	P1210	1,337	19	9,6	2,25	1,2	0,871	G 3/8"	3
	P1212	1,814	14	11,7	2,25	1,2	1,177	G 1/2" - G 7/8"	3
	P1212	2,309	11	11,7	2,15	1,5	1,319	G 1" - G 6"	3
P16	P1616	1,814	14	16	2,15	1,675	1,177	G 1/2" - G 5/8"	6
	P1616	1,814	14	16	2,15	1,675	1,177	G 3/4" - G 7/8"	6
	P1616	2,309	11	16	2,75	2,075	1,478	G 1" - G 6"	6
P20	P2020	1,814	14	20	3,95	1,725	1,177	G 3/4" - G 7/8"	6
	P2020	2,309	11	20	3,95	1,725	1,478	G 1" - G 6"	6
P25	P2526	2,309	11	26	2,75	2,075	1,478	G 1" - G 1 1/4"	6
	P2526	2,309	11	26	2,75	2,075	1,478	G 1 1/2" - G 6"	6

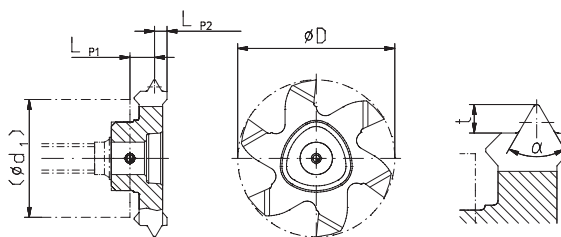
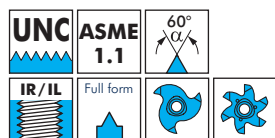


Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,337	19	9,6	2,25	1,2	0,871	G 1/4" - G 3/8"	3
	P1212	1,814	14	11,7	2,3	1,1	1,178	G 1/2" - G 7/8"	3
	P1212	2,309	11	11,7	2,25	1,2	1,498	G 1" - G 6"	3
P16	P1616	1,814	14	16	2,15	1,675	1,177	G 1/2" - G 7/8"	6
	P1616	2,309	11	16	2,75	2,075	1,478	G 1" - G 6"	6
	P1618	1,814	14	17,7	3,15	0,95	1,177	G 1/2" - G 7/8"	6
P20	P2020	1,814	14	20	3,95	1,725	1,177	G 1/2" - G 7/8"	6
	P2020	2,309	11	20	3,95	1,725	1,478	G 1" - G 6"	6
P25	P2526	2,309	11	26	2,75	2,075	1,478	G 1" - G 6"	6

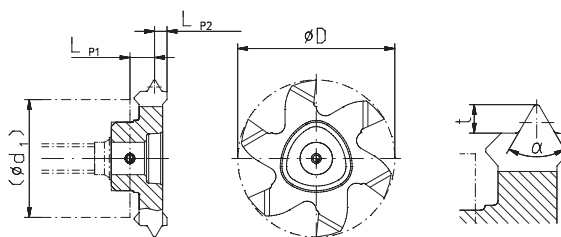
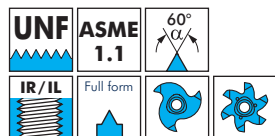
i Taper pipe thread Rp according to ISO 10229 on request

Thread Milling

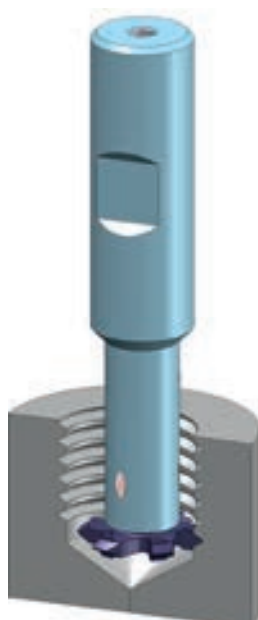
- Insert holder see page 31-33
- Cutting data see page 189



Type		Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	2,117	12	10	2,25	1,2	1,29	UNC 12	3	171883
	P1211	2,309	11	10,5	2,13	1,52	1,35	UNC 11	3	171880
	P1212	2,540	10	11,7	2,13	1,52	1,485	UNC 10	3	171879
P16	P1616	2,822	9	16	2,05	1,775	1,577	UNC 9	6	172148
P20	P2018	3,175	8	18	2,65	2,175	1,809	UNC 8	6	172149
	P2020**	3,629	7	20	2,65	2,175	2,043	UNC 7	6	172150
P25	P2524	4,233	6	24	4,05	3,275	2,454	UNC 6	6	172151
	P2526	5,080	5	26	3,85	3,475	2,979	UNC 5	6	172152
	P2526***	5,644	4,5	26	3,85	3,475	3,289	UNC 4 ½	6	172153



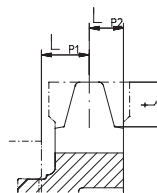
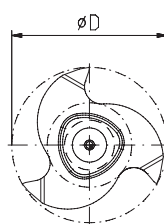
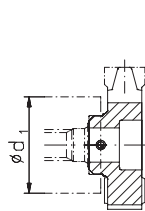
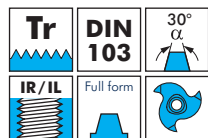
Type		Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210	1,270	20	9,6	2,5	0,95	0,733	UNF 1/2-20	3	171884
	P1211	1,411	18	10,5	2,5	0,95	0,827	UNF 9/16-18	3	171885
	P1212	1,588	16	11,7	2,5	0,95	0,945	UNF 3/4-16	3	171900
P16	P1618	1,814	14	17,7	3,15	0,95	1,071	UNF 7/8-14	6	171950
P20	P2020	2,117	12	20	2,15	1,675	1,228	UNF 1-12	6	171951



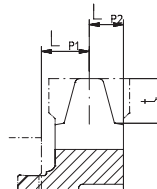
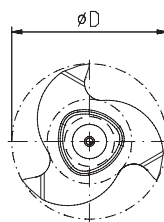
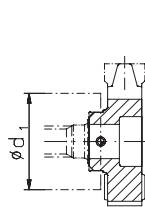
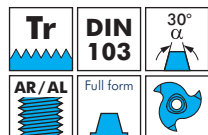
** Not suited for cutter 174314
*** Not suited for cutter 123613

Thread Milling

- Insert holder see page 31-33
- Cutting data see page 189
- Article conditioned on stock



Typ		Pitch mm	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P12	P1212	2,00	11,7	2,5	1,1	1,25	Tr 16x2 - Tr 20x2	6°	3	177717 NEW
	P1211	3,00	11,0	2,23	1,42	1,75	Tr 18x3 - Tr 20x3	6°	3	160862 NEW
	P1212	4,00	12,0	2,15	1,5	2,25	Tr 20x4	6°	3	160308 NEW
P16	P1614*	3,00	14,0	2,3	1,5	1,75	TR 24x3 - Tr 32x3	8°	3	162630 NEW
	P1615*	5,00	15,0	3,15	2,1	2,75	Tr 26x5	8°	3	166213 NEW
	P1615*	5,00	15,0	3,15	2,1	2,75	Tr 28x5	8°	3	150365 NEW
	P1616*	6,00	16,2	4,27	3,0	3,25	Tr 30x6 - Tr 32x6	8°	3	182498 NEW
	P1616*	6,00	16,2	4,22	3,03	3,25	Tr 34x6 - Tr 42x6	8°	3	161736 NEW
P25	P2525	5,00	25,0	3,2	2,37	2,75	Tr 44x5 - Tr 48x5	8°	3	160872 NEW
	P2522***	7,00	22,0	4,0	2,65	3,75	Tr 38x7 - Tr 42x7	8°	3	162648 NEW
	P2522***	7,00	22,0	4,0	2,65	3,75	Tr 44x7	8°	3	161111 NEW
	P2525***	8,00	25,0	4,75	3,4	4,25	Tr 46x8 - Tr 48x8	8°	3	162257 NEW
	P2525***	8,00	25,0	5,03	3,13	4,25	Tr 50x8 - Tr 52x8	8°	3	110966 NEW
	P2525***	9,00	25,0	4,73	3,42	4,75	Tr 55x9 - Tr 60x9	8°	3	160869 NEW
	P2525***	10,00	25,0	4,65	3,5	5,25	Tr 65x10 - Tr 80x10	8°	3	167236 NEW



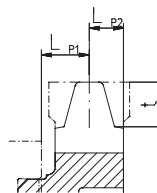
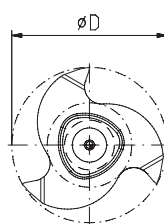
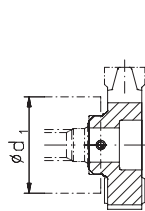
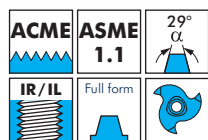
Typ	Pitch mm	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P12	P1212	1,50	11,7		0,90		6°	3	On request NEW
	P1212	2,00	11,7		1,25		6°	3	On request NEW
	P1211	3,00	11,7		1,75		6°	3	On request NEW
	P1212	4,00	11,7		2,25		6°	3	On request NEW
P16	P1616*	3,00	16,0		1,75		8° / 6°	3 / 6	On request NEW
	P1616*	4,00	16,0		2,25		8° / 6°	3 / 6	On request NEW
	P1616*	5,00	16,0		2,75		8° / 6°	3 / 6	On request NEW
	P1616*	6,00	16,0		3,25		8° / 6°	3 / 6	On request NEW
	P2525	4,00	25 / 26		2,25		8° / 6°	3 / 6	On request NEW
P25	P2525***	5,00	25 / 26		2,75		8° / 6°	3 / 6	On request NEW
	P2525***	6,00	25 / 26		3,75		8° / 6°	3 / 6	On request NEW
	P2525***	7,00	25 / 26		3,75		8° / 6°	3 / 6	On request NEW
	P2525***	8,00	25 / 26		4,25		8° / 6°	3 / 6	On request NEW
	P2525***	9,00	25 / 26		4,75		8° / 6°	3 / 6	On request NEW
	P2525***	10,00	25 / 26		5,25		8° / 6°	3 / 6	On request NEW
	P2525***								On request NEW

* Not suited for cutters 123588 and 123590

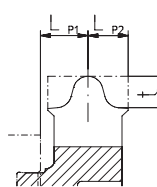
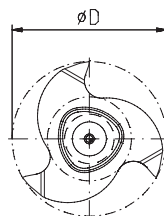
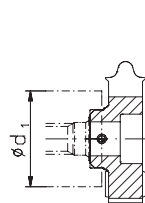
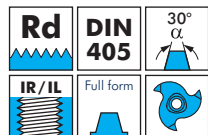
*** Not suited for cutters 123613, 123609 and 123611

Thread Milling

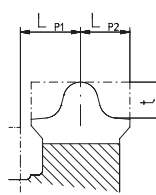
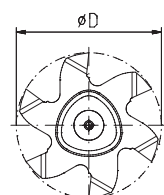
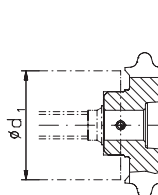
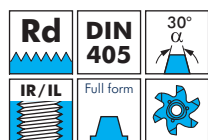
- Insert holder see page 31-33
- Cutting data see page 189
- Conditional deliverable
- Further sizes on request



Typ		Pitch mm	Pitch / °	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P16	P1616	5,08	5	16	3,02	2,23	1,52	1"-5 Gg - 1 1/8"-5 Gg	8°	3	182614 NEW
	P1616	6,35	4	16	4,04	3,21	1,9	1 1/4"-4 Gg - 1 1/2"-4 Gg	8°	3	172556 NEW
P25	P2524	6,35	4	24	3,9	2,75	1,9	1 3/4"-4 Gg - 2"-4 Gg	8°	3	162654 NEW
	P2525	8,467	3	25	4,65	3,5	2,54	2 1/4"-3 Gg - 2 3/4"-3 Gg	8°	3	161935 NEW



Typ		Pitch mm	Pitch / °	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P16	P1613	3,175	8	13	3,15	2,1	1,588	Rd 20 x 1/8	8°	3	174442 NEW
	P1614	3,175	8	14	3,15	2,1	1,588	Rd 22 x 1/8	8°	3	161424 NEW
	P1616	3,175	8	15	2,4	1,9	1,588	Rd 24 x 1/8 - Rd 26 x 1/8	8°	3	161156 NEW
	P1616	3,175	8	16	2,4	1,9	1,588	Rd 28 x 1/8 - Rd 32 x 1/8	8°	3	174421 NEW
	P1616	3,175	8	16	2,4	1,9	1,588	Rd 34 x 1/8 - Rd 38 x 1/8	8°	3	162544 NEW
	P1616*	4,233	6	16	3,15	2,575	2,117	Rd 40 x 1/6 - Rd 55 x 1/6	8°	3	160954 NEW
	P1616*	4,233	6	16	3,15	2,575	2,117	Rd 58 x 1/6 - Rd 80 x 1/6	8°	3	161067 NEW
	P1616*	4,233	6	16	3,15	2,575	2,117	Rd 82 x 1/6 - Rd 100 x 1/6	8°	3	161110 NEW
	P1616*	6,35	4	16	4,15	3,125	3,175	Rd 105 x 1/4 - Rd 200 x 1/4	8°	3	160995 NEW

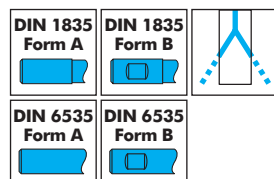
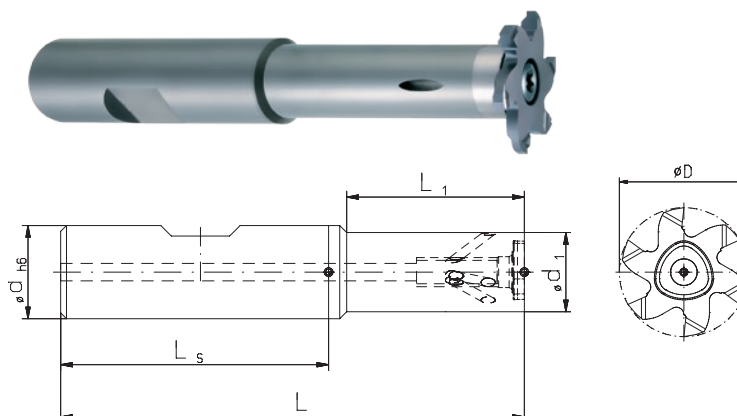


Typ		Pitch mm	Pitch / °	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P16	P1616	3,175	8	16	2,65	2	1,588	Rd 28 x 1/8	6°	6	175137 NEW
P25	P2526	4,233	6	26	3,85	3,4	2,117	Rd 65 x 1/6	6°	6	172430 NEW
	P2526	6,35	4	26	3,85	3,4	3,175	Rd 105 x 1/4 - Rd 120 x 1/4	6°	6	168288 NEW

i Knuckle thread acc. to DIN 20400 on request

Circular Milling Tools with Polygonal Insert Seat

- Inserts see page 24-30
- Cutting data see page 189



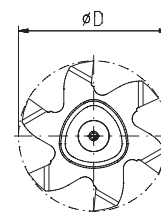
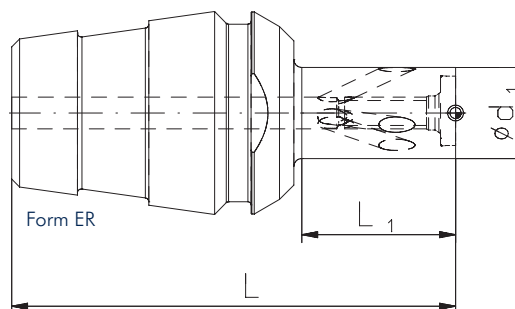
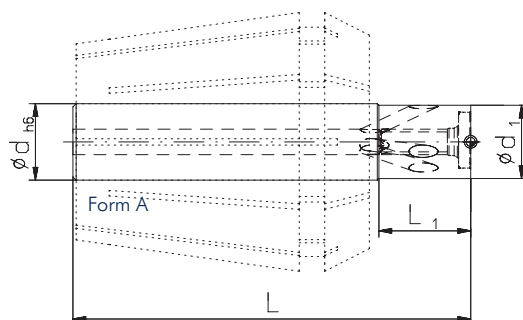
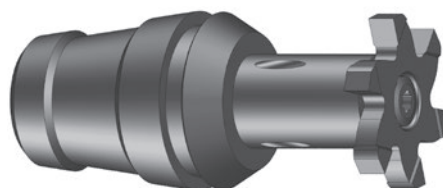
											Spare part No.	
Type	Order No.	Form	Bore Ø min. recom- mended	d _{h6} mm	d ₁ mm	D _{max.} mm	S _{max.} (D-d ₁)/2 mm	L mm	L ₁ mm	Shaft	Screw-driver	Screw
P12	123619	B	12	12	7,0	11,7	2,35	67,5	20	Steel	T8 IP 111656	M2,5x7 107596
	100228	B	12	12	7,0	11,7	2,35	67,5	20	Carbide		
	171778	A	12	12	7,0	11,7	2,35	67,5	20	Carbide		
	171780	B	12	12	7,0	11,7	2,35	80	30	Carbide		
	171781	A	12	12	7,0	11,7	2,35	80	30	Carbide		
	171783	B	12	12	7,0	11,7	2,35	100	40	Carbide		
	171784	A	12	12	7,0	11,7	2,35	100	40	Carbide		
P16	123573	B	18	12	9,0	17,7	4,35	67,4	21	Steel	T8 IP 111656	M3x12 143158
	123577	B	18	12	9,0	17,7	4,35	67,4	21	Carbide		
	171787	A	18	12	9,0	17,7	4,35	67,4	21	Carbide		
	123580	B	18	12	9,0	17,7	4,35	82,4	36	Carbide		
	171789	A	18	12	9,0	17,7	4,35	82,4	36	Carbide		
	123584	A	18	12	9,0	17,7	4,35	100	30	Carbide		
	123588	A	18	12	12,0	17,7	2,85	82,4	-	Carbide		
P20	123590	A	18	12	12,0	17,7	2,85	122,5	-	Carbide		
	123615	B	22	16	11,5	21,7	5,1	80	30	Steel	T15 IP 111671	M4x13 107597
	123616	B	22	16	11,5	21,7	5,1	80	30	Carbide		
	171794	A	22	16	11,5	21,7	5,1	80	30	Carbide		
	123617	B	22	16	11,5	21,7	5,1	100	50	Carbide		
	171796	A	22	16	11,5	21,7	5,1	100	50	Carbide		
	174314	A	22	16	15,5	21,7	3,1	105,5	21	Carbide		
P25	123592	B	28	16	13,6	27,7	7,05	79,6	30,5	Steel	T20 IP 111594	M5x13,5 107529
	123598	B	28	16	13,6	27,7	7,05	79,6	30,5	Carbide		
	171855	A	28	16	13,6	27,7	7,05	79,6	30,5	Carbide		
	123600	B	28	16	13,6	27,7	7,05	94,6	45,5	Carbide		
	171857	A	28	16	13,6	27,7	7,05	94,6	45,5	Carbide		
	123603	B	28	16	13,6	27,7	7,05	109,6	60,5	Carbide		
	171859	A	28	16	13,6	27,7	7,05	109,6	60,5	Carbide		
	123609	A	28	16	15,5	27,7	6,1	105	21,5	Carbide		
	123611	A	28	16	15,5	27,7	6,1	149,5	21,5	Carbide		
	123613	A	28	20	15,5	27,7	6,1	178,5	21,5	Carbide		

Screw torques max.

107596	T08 IP	1,0 Nm
143158	T08 IP	1,1 Nm
107597	T15 IP	3,8 Nm
107529	T20 IP	5,5 Nm

Circular Milling Tools for Driven Toolholders

- Inserts see page 24-30
- Cutting data see page 189



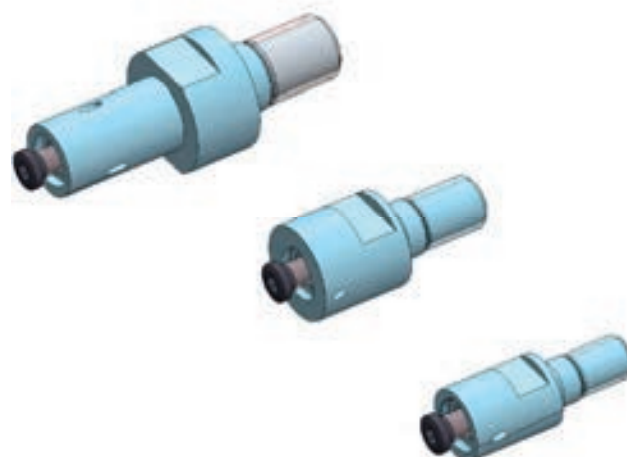
Type	Order No.	Form	Bore Ø min. recom- mended	dh6 mm	d1 mm	D max. mm	S max. (D-d1)/2 mm	L mm	L1 mm	Shaft	Spare part No.	
											Screw- driver	Screw
P12	177170	A	12	10	7,0	11,7	2,35	54	8	Steel	T8 IP 111656	M2,5x7 107596
	177172	ER 16	12		7,0	11,7	2,35	37,5	8	Steel		
	177173	ER 20	12		7,0	11,7	2,35	47	13	Steel		
P16	177174	A	18	10	9,0	17,7	4,35	60	11	Steel	T8 IP 111656	M3x12 143158
	177176	ER 16	18		9,0	17,7	4,35	41,4	11	Steel		
	177177	ER 20	18		9,0	17,7	4,35	51	16	Steel		
P20	177178	A	22	12	11,5	21,7	5,1	62,4	14,4	Steel	T15 IP 111671	M4x13 107597
	177180	ER 20	22		11,5	21,7	5,1	49,5	14,5	Steel		
	177181	ER 25	22		11,5	21,7	5,1	56	19,4	Steel		
P25	177182	A	28	16	13,6	27,7	7,05	69,6	20,4	Steel	T20 IP 111594	M5x13,5 107529
	177184	ER 25	28		13,6	27,7	7,05	56	19,4	Steel		
	177185	ER 32	28		13,6	27,7	7,05	73	30,4	Steel		

Screw torques max.

107596	T8 IP	1,0 Nm
143158	T8 IP	1,1 Nm
107597	T15 IP	3,8 Nm
107529	T20 IP	5,5 Nm

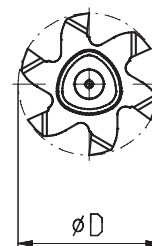
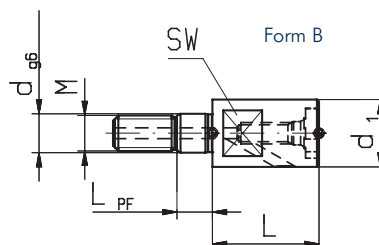
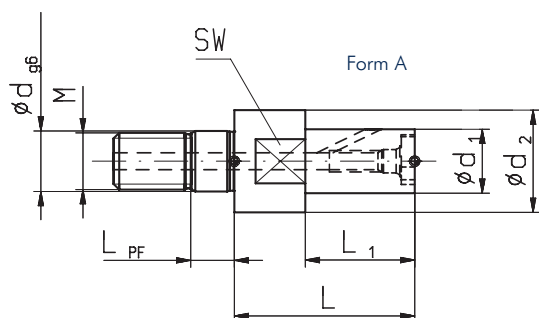
Changing Inserts

Clamp cutter before changing insert. Loosen insert screw. Remove used insert and clean the insert pocket before clamping new insert. Please use the appropriate TIP hex key for the tightening of the inserts and consider the screw tightening torques in the tables.



Circular Milling Tools with Polygonal Insert Seat

- Inserts see page 24-30
- Cutting data see page 189



Please adapt cutting data
to overhangs length

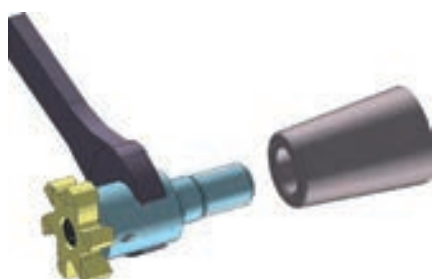
Type	Order No.	Form	Bore Ø min. recommended	d1 mm	d2 mm	Dmax. mm	S _{max.} (D-d1)/2 mm	L mm	L1 mm	M	dg6 mm	L PF mm	Spare part No.	
													Screwdriver	Screw
P12***	177676	B	12	9,5	–	11,7	1,1	13,5	–	M5	5,5	5,0	111656	107596
P16	123586	A	18	9,0	14,4	17,7	4,35	29,5	19,5	M8	8,5	5,5	111656	143158
P16**	177683	B	18	9,5	–	17,7	4,1	18,5	–	M5	5,5	5,0	111656	143158
P16***	177698	B	18	11,0	–	17,7	3,35	18,5	–	M6	6,5	5,0	111656	143158
P20	123618	A	22	11,5	18,0	21,7	5,1	35,0	25,0	M10	10,5	5,5	111671	107597
P20**	177734	B	22	11,5	–	21,7	5,1	20,5	–	M6	6,5	5,0	111671	107597
P20***	177735	B	22	13,5	–	21,7	4,1	20,5	–	M8	8,5	5,5	111671	107597
P25	123605	A	27	13,6	22,5	27,7	7,05	42,5	29,5	M12	12,5	5,5	111594	107529
P25**	177747	B	27	13,6	–	27,7	7,05	22,6	–	M8	8,5	5,5	111594	107529
P25***	177767	B	27	18,0	–	27,7	4,85	22,6	–	M10	10,5	5,5	111594	107529

** Slim design for thread milling
*** Reinforced design

Screw torques max.		
107596	T8 IP	1,0 Nm
143158	T8 IP	1,1 Nm
107597	T15 IP	3,8 Nm
107529	T20 IP	5,5 Nm

Assembling Instructions

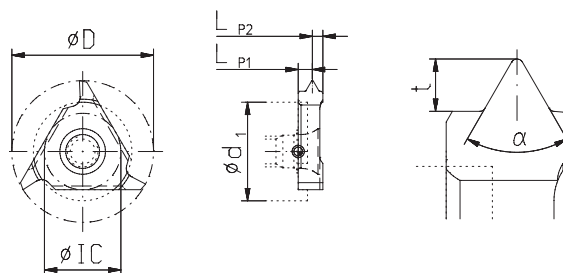
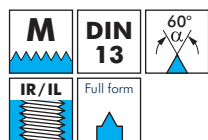
- Recommended tightening torque for
screw-in circular milling body



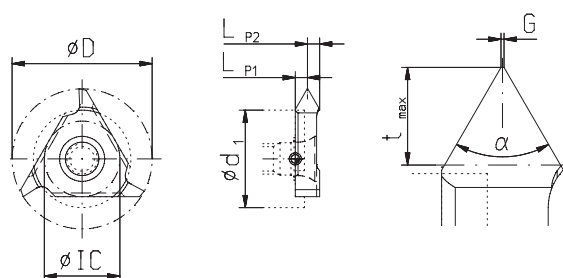
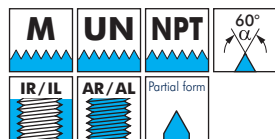
Thread size (M)	Wrench size mm	Tightening torque Nm
M5	7	8
M6	9	10
M8	11	25
M10	15	40
M12	19	60

Thread Milling

- Insert holder see page 36
- Cutting data see page 189



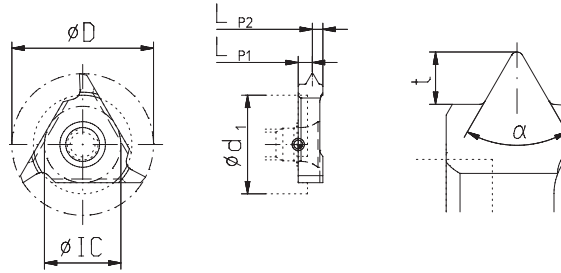
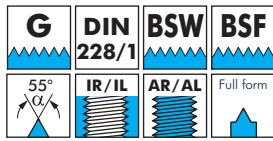
Type	Pitch mm	D mm	IC mm	LP1 mm	LP2 mm	t mm	Thread	Order No. TINAMATIC
03	1,0	10,6	5,5	1,64	0,7	0,578	≥ M 12	141613
	1,5	10,6	5,5	1,39	0,95	0,864	≥ M 14	141674
	2,0	10,6	5,5	2,0	1,0	1,159	≥ M 16	141647
02	1,0	17,5	9,2	2,8	0,7	0,578		141443
	1,5	17,5	9,2	2,55	0,95	0,864		141482
	2,0	17,5	9,2	2,3	1,2	1,159		141484
	2,5	17,5	9,2	2,05	1,45	1,444		141514
	2,5	16,0	9,2	1,75	1,75	1,444	only M20	141516
	3,0	17,5	9,2	2,1	1,4	1,728		141494
	1,0	23,0	12,4	3,3	0,7	0,578		141317
01	1,5	23,0	12,4	3,05	0,95	0,864		141291
	2,0	23,0	12,4	2,8	1,2	1,159		141312
	2,5	23,0	12,4	2,55	1,45	1,444		141287
	3,0	23,0	12,4	2,3	1,7	1,728		141339
	3,5	23,0	12,4	2,3	1,7	2,023		141300
	4,0	23,0	12,4	2,3	1,7	2,308		141347
	4,5	23,0	12,4	4,0	2,5	2,602		141365
	5,0	23,0	12,4	4,0	2,5	2,887		141342
	5,5*	23,0	12,4	3,6	2,9	3,182		141350
	6,0*	23,0	12,4	3,2	3,3	3,467		141369



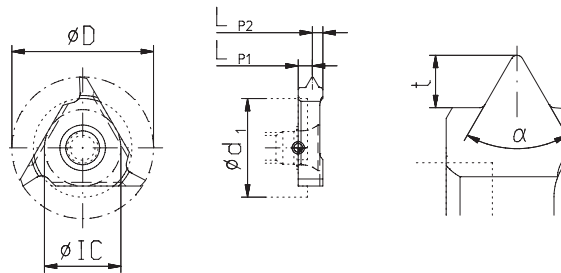
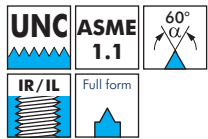
Type	Pitch mm	D mm	IC mm	LP1 mm	LP2 mm	G mm	t _{max} mm	Order No. TINAMATIC
03	1-2,0	10,6	5,5	1,5	1,5	0,1	1,6	141677
02	1-3,5	17,5	9,2	1,59	1,91	0,1	2,15	141528
01	1-4,0	23,0	12,4	1,85	2,15	0,1	2,45	141366

Thread Milling

- Insert holder see page 36
- Cutting data see page 189



Type	Pitch mm	Pitch /"	D mm	IC mm	LP1 mm	LP2 mm	t mm	Thread	TINAMATIC
03	1,337	19	10,6	5,5	1,25	1,09	0,871	G 1/4"	141652
	1,337	19	10,6	5,5	1,25	1,09	0,871	G 3/8"	141682
	1,814	14	16,0	9,2	1,75	1,75	1,162	G 1/2"	141508
02	1,814	14	17,5	9,2	2,2	1,3	1,162		141488
	2,309	11	17,5	9,2	1,9	1,6	1,494		141522
	3,175	8	17,5	9,2	1,75	1,75	1,830	BSW 1"	160665 NEW
	3,175	8	17,5	9,2	1,75	1,75	1,830	BSF	161718 NEW
	2,309	11	23,0	12,4	2,4	1,6	1,494		141381



Type	Pitch mm	Pitch /"	D mm	IC mm	LP1 mm	LP2 mm	t mm	Thread	TINAMATIC
03	1,954	13	10,0	5,5	1,17	1,17	1,099	1/2-13	149460
	2,309	11	10,6	5,5	1,17	1,17	1,349	5/8-11	149204
	2,540	10	10,6	5,5	1,17	1,17	1,470	3/4-10	149732

Request Form for Tread Milling

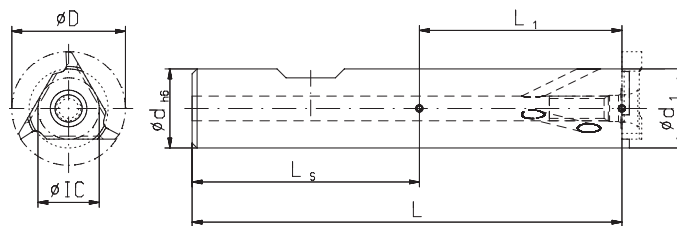
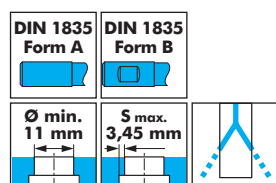
Please download our fillable PDF form for a detailed thread milling request and fax or send us back via email: info@mimatic.de

Request form:
www.mimatic.de/CL/GEW-EN



Circular Milling Tools

- Inserts see page 34
- Cutting data see page 189



												Spare part No.	
Type	Order No.	Form	Bore Ø min.	D mm	IC mm	d h6 mm	d1 mm	S max. mm	L mm	L1 mm	Shaft	Screw-driver	Screw
03	123477*	B	11	10,6	5,5	10	7,4	1,6	57,2	17,2	Steel	T6 IP 111705	107530
	123478*	B	11	10,6	5,5	12	7,4	1,6	64,66	17,2	Steel		
	123479*	A	11	10,6	5,5	12	7,4	1,6	64,66	17,2	Steel		
	123480	B	11	10,6	5,5	10	7,4	1,6	74,2	34,2	Carbide		
	123489	A	11	10,6	5,5	8	8	1,25	77,66	–	Carbide		
02	123445	B	20	17,5	9,2	12	12	2,6	74,05	28,7	Steel	T15 IP 111671	107547
	123446	B	20	17,5	9,2	16	12	2,6	78,6	28,7	Steel		
	123447	A	20	17,5	9,2	16	12	2,6	78,6	28,7	Steel		
	123448	B	20	17,5	9,2	12	12	2,6	108,7	63,7	Carbide		
	123470	A	20	17,5	9,2	12	12	2,6	79,3	–	Carbide		
	123471	A	20	17,5	9,2	12	12	2,6	96,5	–	Carbide		
01	123474	A	20	17,5	9,2	12	12	2,6	121,5	–	Carbide	T20 IP 111594	107551
	123412	B	25	23,0	12,4	16	16	3,45	87,0	38,5	Steel		
	123414	B	25	23,0	12,4	16	16	3,45	116,0	67,5	Steel		
	123415**	A	25	23,0	12,4	20	17	3,0	93,0	41,0	Steel		
	170320	A	25	23,0	12,4	16	17	3,0	137,0	88,5	Carbide		
	123416	B	25	23,0	12,4	16	17	3,0	137,0	88,5	Carbide		
	123440	A	25	23,0	12,4	16	16	3,45	111,0	–	Carbide		
	123441	A	25	23,0	12,4	16	16	3,45	148,5	–	Carbide		

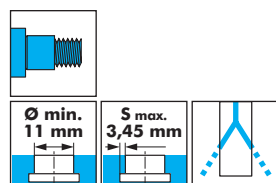
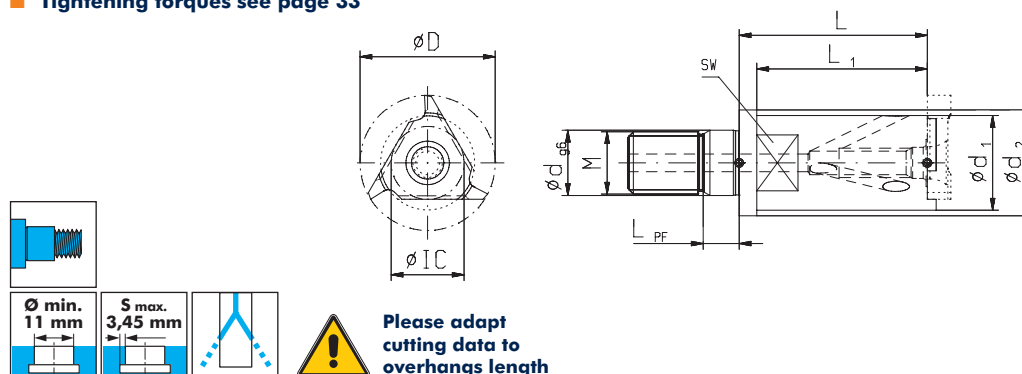
* Without internal coolant supply

** Also suitable as basic body for a tandem cutter.

Screw torques max.

107530	T6 IP	0,9 Nm
107547	T15 IP	3,8 Nm
107551	T20 IP	5,5 Nm

- Tightening torques see page 33



Please adapt cutting data to overhangs length

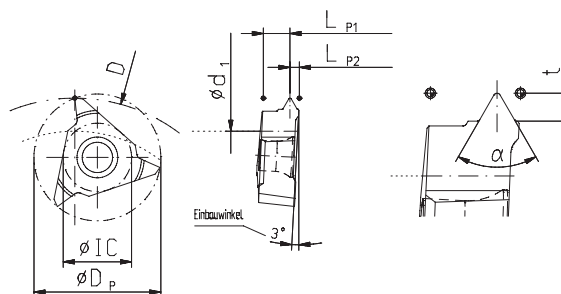
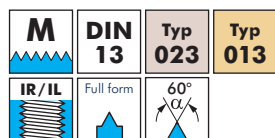
												Spare part No.	
Type	Order No.	Bore Ø min.	D mm	IC mm	d g6 mm	d1 mm	d2 mm	S max. mm	L mm	L1 mm	M	Screw-driver	Screw
03	123481	11	10,6	5,5	6,5	7,4	10,0	1,60	22,66	13,66		111705	107530
02	123450	20	17,5	9,2	8,5	12,2	15,4	2,60	27,5	18,5		111671	107547
01	123419	25	23,0	12,4	10,5	16,1	18,0	3,45	32,0	29,0		111594	107551

Screw torques max.

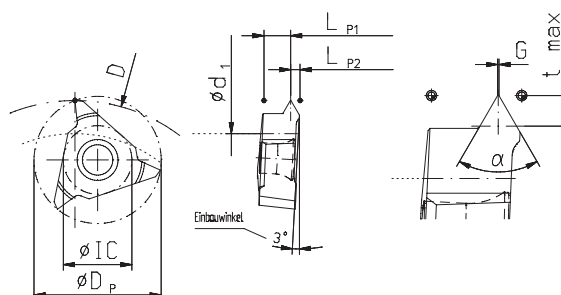
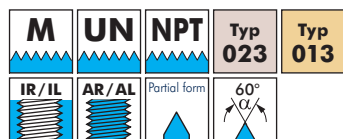
107530	T6 IP	0,9 Nm
107547	T15 IP	3,8 Nm
107551	T20 IP	5,5 Nm

Thread Milling

- Insert holder see page 39-40
- Cutting data see page 189



Type	Pitch mm	D _P mm	IC mm	L _{P1} mm	L _{P2} mm	t mm	Order No. TINAMATIC
023	1,5	17,5	9,2	4,08	0,95	0,864	142020
	2,0	17,5	9,2	3,83	1,2	1,159	142003
	2,5	17,5	9,2	3,52	1,51	1,444	141989
	3,0	17,5	9,2	3,33	1,7	1,728	141988
	4,0	17,5	9,2	2,63	2,4	2,308	142028
	4,5*	17,5	9,2	2,53	2,5	2,602	141998
	5,0*	17,5	9,2	3,13	2,9	2,887	142009
	5,5*	17,5	9,2	2,7	3,33	3,128	142032
013	6,0*	17,5	9,2	2,7	3,33	3,467	142000
	1,5	23,0	12,4	5,58	0,95	0,864	141920
	2,0	23,0	12,4	5,33	1,2	1,159	141910
	2,5	23,0	12,4	5,02	1,51	1,444	141935
	3,0	23,0	12,4	4,83	1,7	1,728	141943
	3,5	23,0	12,4	4,83	1,7	2,023	141961
	4,0	23,0	12,4	4,63	1,9	2,308	141947
	4,5	23,0	12,4	4,03	2,5	2,602	141964
	5,0	23,0	12,4	4,03	2,5	2,887	141955
	6,0	23,0	12,4	3,23	3,3	3,467	141976
	8,0	23,0	12,4	3,454	3,941	4,731	150338 NEW

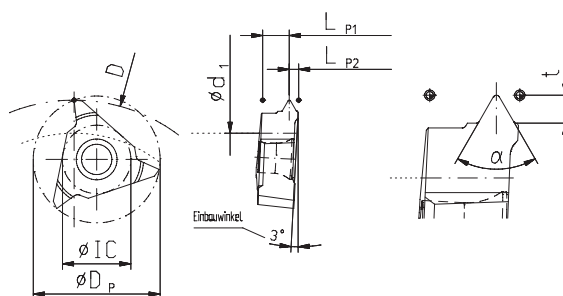


Type	Pitch mm	D _P mm	IC mm	L _{P1} mm	L _{P2} mm	G mm	S _{max.} mm	Order No. TINAMATIC
023	1-3,5	17,5	9,2	3,28	1,75	0,10	2,15	141996
	3-6,0*	17,5	9,2	2,7	3,33	0,25	3,75	142010
013	1-3,0	23,0	12,4	4,88	1,65	0,10	2,15	141969
	3,5-6	23,0	12,4	2,8	3,73	0,40	4,75	141951

Thread Milling

- Insert holder see page 39-40
- Cutting data see page 189

G	DIN	BSW	BSF	Typ	Typ
228/1				023	013
IR/IL	AR/AL	Full form	55°		



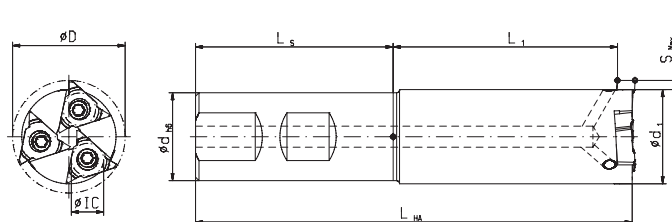
Type	Pitch mm	Pitch / "	DP mm	IC mm	LP1 mm	LP2 mm	t mm	Order No. TINAMATIC
023	2,309	11	17,5	9,2	3,33	1,7	1,494	142022
013	2,309	11	23,0	12,4	4,14	2,39	1,494	141941



Circular Milling Tools

- Inserts see page 37-38
- Cutting data see page 189
- Carbide grades see page 123

Typ 023	DIN 1835 Form B	IC 9,2
Ø min. 33 mm	S max. 2,6 mm	



Order No.	Bore Ø min.	D mm	d h6 mm	d1 mm	S max. mm	LHA mm	L mm	L1 mm	Inserts	Shaft
123462	33	32	25	26,8	2,6	124,2	119,97	61,97	3	Steel

Spare part No.

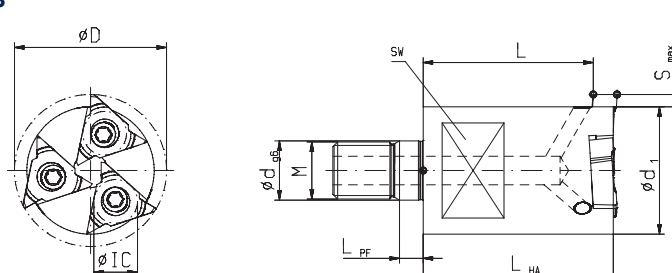
T15 IP Screw-driver	Screw
111671	107547

Screw torque max. 3,8 Nm

- Tightening torques see page 33



Typ 023		IC 9,2
Ø min. 33 mm	S max. 3,4 mm	

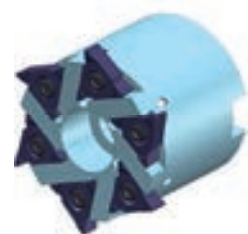
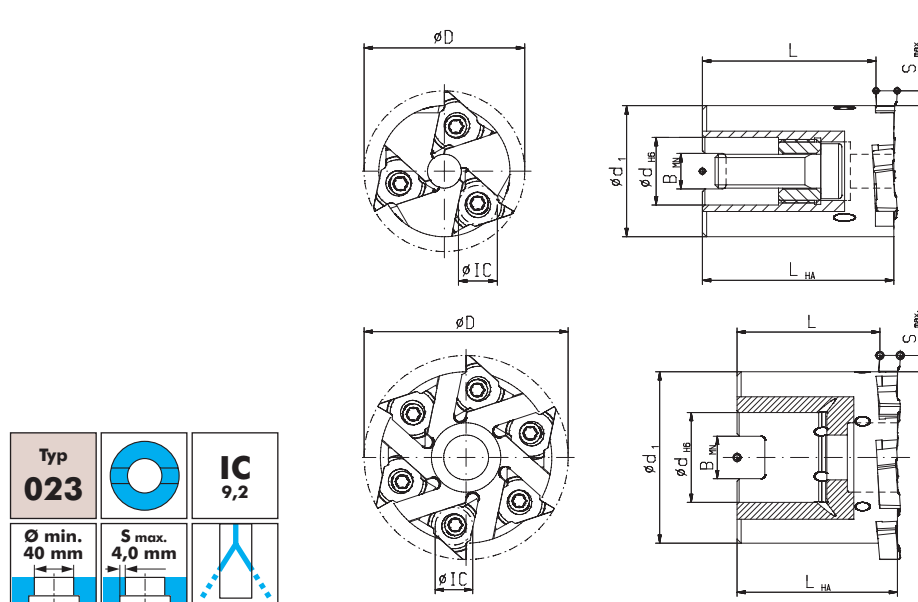


Order No.	Bore Ø min.	D mm	d g6 mm	d1 mm	S max. mm	LHA mm	L mm	Inserts	M
123465	33	32	12,5	24,3	3,8	40	34,97	3	M12

Spare part No.

T15 IP Screw-driver	Screw
111671	107547

Screw torque max. 3,8 Nm



Typ 023		IC 9,2
Ø min. 40 mm	S max. 4,0 mm	

Order No.	Bore Ø min.	D mm	dH6 mm	d1 mm	S max. mm	LHA mm	L mm	BMN mm	Inserts
123464	40	38	16	31	3,4	45,3	40,97	8,4	3
123461*	55	50	22	42	3,9	39,3	34,97	10,4	6

Accessories



134984

Spare part No.

T15 IP Screw-driver	Screw
111671	107547
111671	107547

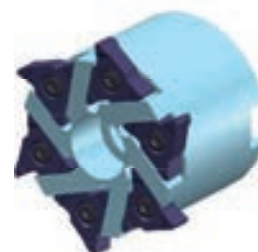
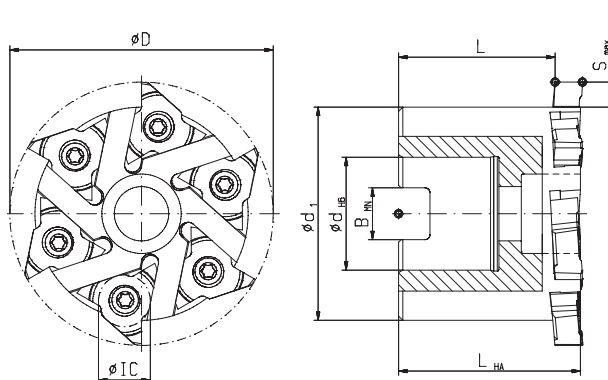
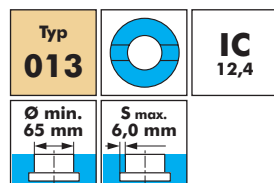
Screw torque max. 3,8 Nm

* Cutter clamping screw internal hexagon

Order No. 114684

Circular Milling Tools

- Inserts see page 37-38
- Cutting data see page 189
- Carbide grades see page 123



Order No.	Bore Ø min.	D mm	d H6 mm	d1 mm	S max. mm	LHA mm	L mm	BMN mm	Inserts	T20 IP Screw-driver	Screw
123435	65	63	27	51	6	43,5	37,5	12,4	6	111594	107551

Spare part No.

T20 IP

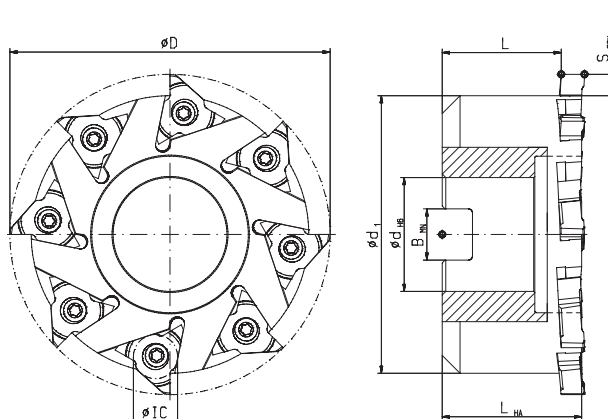
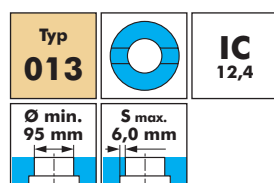
Screw-driver

Screw

Screw torque 5,5 Nm

Cutter clamping screw internal hexagon

Order No. 114695



Order No.	Bore Ø min.	D mm	d H6 mm	d1 mm	S max. mm	LHA mm	L mm	BMN mm	Inserts	T20 IP Screw-driver	Screw
123436	95	90	32	78	6	39,2	33,5	14,4	8	111594	107551

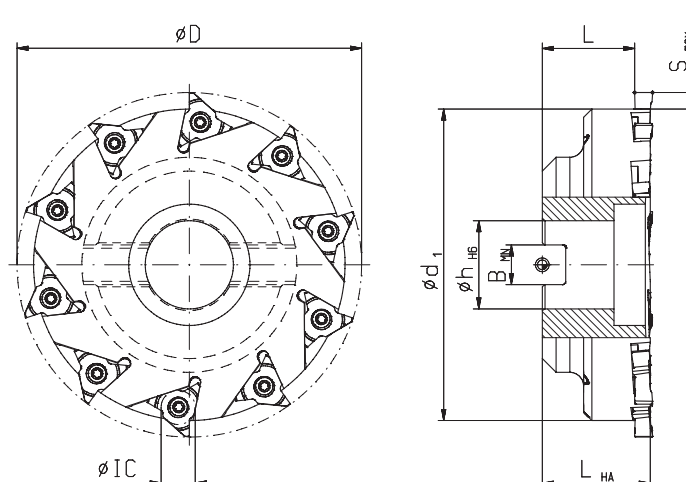
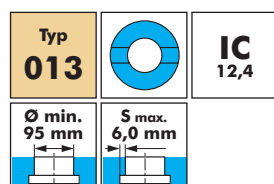
Spare part No.

T20 IP

Screw-driver

Screw

Screw torque 5,5 Nm



Order No.	Bore Ø min.	D mm	d H6 mm	d1 mm	S max. mm	LHA mm	L mm	BMN mm	Inserts	T20 IP Screw-driver	Screw
134561 NEW	130	125	32	113	6,0	39,2	33,5	14,4	10	111594	107551

Spare part No.

T20 IP

Screw-driver

Screw

Screw torque 5,5 Nm