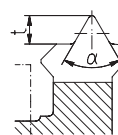
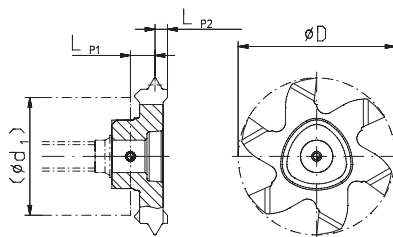
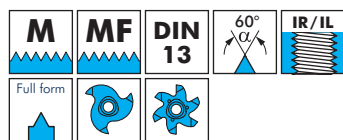


Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173



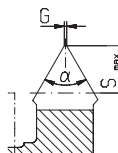
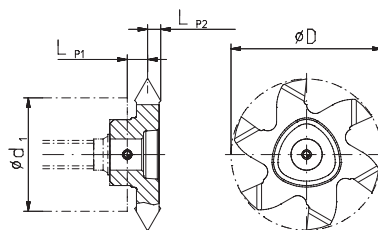
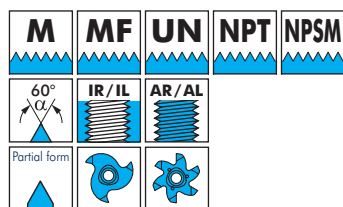
Typ		Pitch mm	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210 *	1,00	9,6	2,65	0,80	0,572	≥ M14x1	3	171875
	P1210 *	1,50	9,6	2,50	0,95	0,875	≥ M16x1,5	3	171876
	P1210 *	1,75	9,6	2,25	1,20	1,010	only M12	3	175479
	P1211 *	2,00	10,5	2,25	1,20	1,127	only M14, M16	3	160857
	P1211 *	2,00	10,5	2,25	1,20	1,157	≥ M20x2	3	171877
P16	P1616	1,00	16,0	2,80	1,03	0,572	≥ M20x1	6	107240
	P1616	1,50	16,0	2,55	1,28	0,864	≥ M24x1,5	6	142569
	P1616	2,00	16,0	2,55	1,28	1,157	≥ M26x2	6	142570
	P1616	2,50	16,0	2,05	1,78	1,444	≥ M30x2,5	6	142543
	P1616	2,50	16,0	2,05	1,78	1,400	only M20	6	142534
	P1616	3,00	16,0	3,05	1,78	1,702	≥ M32x3	6	142575
P20	P2020	1,50	20,0	2,55	1,28	0,875	≥ M26x1,5	6	168683
	P2020	2,00	20,0	2,55	1,28	1,157	≥ M30x2	6	168684
	P2020	3,00	20,0	2,15	1,68	1,745	only M24	6	168685
P25	P2526	1,50	26,0	2,15	1,28	0,875	≥ M34x1,5	6	142617
	P2526	2,00	26,0	2,55	1,28	1,159	≥ M38x2	6	142644
	P2526	3,00	26,0	2,95	1,88	1,702	≥ M45x3	6	142599
	P2524	3,50	24,0	2,75	2,08	1,960	only M30	6	142671
	P2526	3,50	26,0	2,90	1,93	1,980	≥ M50x3,5	6	142623
	P2526	4,00	26,0	2,90	1,93	2,262	≥ M52x4	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	≥ M56x4,5	6	142638
	P2526	5,00	26,0	3,85	3,48	2,836	≥ M62x5	6	107275
	P2526	5,50	26,0	3,85	3,48	3,182	≥ M68x5,5	6	161786
	P2526	6,00	26,0	3,85	3,48	3,467	≥ M72x6	6	175645

NEW

NEW



External thread according to DIN 13 on request



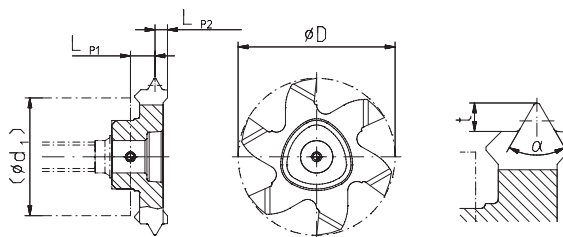
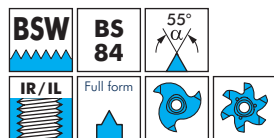
Type		Pitch mm	D mm	LP1 mm	LP2 mm	G mm	Number of teeth	Order No. TINAMATIC
P12	P1212	1-3	11,7	2,125	1,33	0,10	3	171911
P16	P1616 **	1-4	16,0	2,70	1,68	0,10	6	142580
	P1616 **	2,5-4	16,0	2,70	1,68	0,25	6	142544
	P1618	1-3	17,7	2,70	1,05	0,10	6	171954
P20	P2020	1-3	20,0	2,15	1,68	0,10	6	168686
	P2022	1-2	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	2,93	0,40	6	175936

* Not suited for cutter 177676

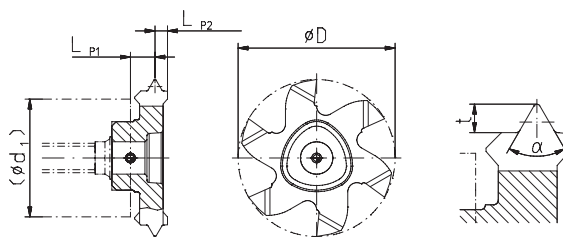
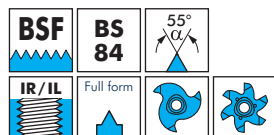
**Not suited for pitch 4,0 mm with the cutters 123588 and 123590

Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173
- 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
	P1210 *	2,309	11	10,4	2,15	1,5	1,494	BSW 5/8 + 11/16	3	160998
	P1212 *	2,540	10	11,7	2,2	1,4	1,455	BSW 3/4 + 13/16	3	160663
P16	P1616	2,822	9	16	2,15	1,675	1,622	BSW 7/8 + 15/16	6	160940
	P1616	3,175	8	16	2,65	1,84	1,83	BSW 1	6	161053
	P1616 **	3,629	7	16	2,65	2,05	2,098	BSW 1 1/8 + 1 1/4	6	161166
	P1616 **	4,233	6	16	3,175	2,2	2,455	BSW 1 3/8 + 1 1/2	6	162371
P20	P2020	3,629	7	20	2,7	2,225	2,098	BSW 1 1/2 + 1 3/4	6	160959
	P2020 ***	4,233	6	20	3,15	2,675	2,455	BSW 1 3/4 + 1 1/2	6	161270
P25	P2524	4,233	6	24	4,4	2,675	2,455	BSW 1 3/8	6	161466
	P2524	4,233	6	24	4,4	2,675	2,455	BSW 1 1/2	6	162615
	P2524	5,080	5	24	3,9	2,875	2,955	BSW 1 3/8 + 1 3/4	6	161100



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
	P1210 *	2,117	12	10	2,25	1,1	1,371	BSF 3/4 + 11/16	3	161623
	P1210 *	2,309	11	10,4	2,15	1,5	1,494	BSF 7/8	3	160951
	P1212 *	2,540	10	11,7	2,20	1,4	1,455	BSF 1	3	161797
P16	P1616	2,822	9	16	2,15	1,675	1,622	BSF 1 1/8 + 1 1/4	6	160989
	P1616	3,175	8	16	2,15	1,675	1,83	BSF 1 3/8 - 1 1/2	6	162077
	P1616 **	3,629	7	16	2,65	2,05	2,098	BSF 1 3/4 + 2	6	160960
	P1616 **	4,233	6	16	3,175	2,2	2,455	BSF 2 1/4 - 2 3/4	6	162305
P20	P2020	3,175	8	20	2,15	1,675	1,83	BSF 1 3/8 - 1 1/2	6	161089
	P2020	3,629	7	20	2,7	2,225	2,098	BSF 1 1/4 + 2	6	161341
	P2020 ***	4,233	6	20	3,15	2,675	2,455	BSF 2 1/4 - 2 3/4	6	160942
P25	P2524	3,175	8	24	2,1	1,675	1,83	BSF 1 3/8 - 1 1/2	6	162051
	P2524	3,629	7	24	2,65	2,175	2,098	BSF 1 1/4 + 2	6	161436
	P2524	4,233	6	24	4,4	2,675	2,455	BSF 2 1/4 - 2 3/4	6	161887
	P2524	5,080	5	24	3,9	2,875	2,955	BSF 3 - 3 1/4	6	161250

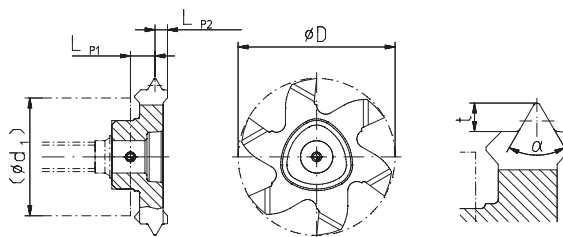
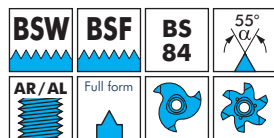


External thread BSW/BSF see next page

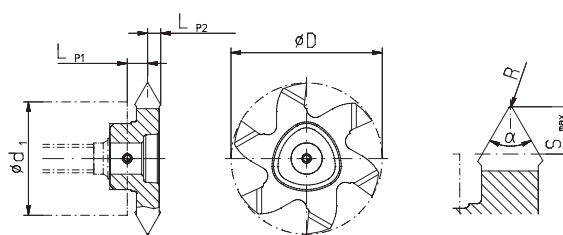
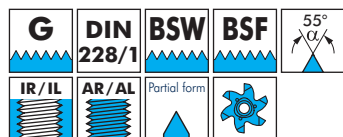
* Not suited for cutter 177676
 ** Not suited for cutters 123588 and 123590
 *** Not suited for cutter 174314

Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173
- 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	P1212 *	1,814	14	11,7	2,30	1,3	1,178 BSW/BSF - 14 Gg	3	160943
	P1212 *	2,117	12	11,7	2,25	1,4	1,374 BSW/BSF - 12 Gg	3	160967
	P1212 *	2,309	11	11,7	2,25	1,4	1,498 BSW/BSF - 11 Gg	3	161112
	P1212 *	2,540	10	11,7	2,25	1,4	1,646 BSW/BSF - 10 Gg	3	161184
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
	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
	P1616 **	3,175	8	16	2,65	1,820	2,056 BSW/BSF - 8 Gg	6	161744
	P1616 **	3,629	7	16	3,15	2,225	2,348 BSW/BSF - 7 Gg	6	162097
	P1616 **	4,233	6	16	3,15	2,225	2,737 BSW/BSF - 6 Gg	6	162650
P20	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
	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
	P2020	2,822	9	20	2,10	1,725	1,829 BSW/BSF - 9 Gg	6	160997
	P2020 ***	3,175	8	20	2,65	2,175	2,056 BSW/BSF - 8 Gg	6	161113
	P2020 ***	3,629	7	20	2,65	2,175	2,348 BSW/BSF - 7 Gg	6	161259
	P2020 ***	4,233	6	20	3,15	2,675	2,737 BSW/BSF - 6 Gg	6	161325
P25	P2526	2,309	11	26	2,75	2,075	1,478 BSW/BSF - 11 Gg	6	142600
	P2526	3,175	8	26	2,60	2,175	2,056 BSW/BSF - 8 Gg	6	160949
	P2526	3,629	7	26	2,60	2,175	2,348 BSW/BSF - 7 Gg	6	160950
	P2524	4,233	6	24	4,40	2,675	2,737 BSW/BSF - 6 Gg	6	161130
	P2524 ****	5,080	5	24	4,40	2,675	3,281 BSW/BSF - 5 Gg	6	161400



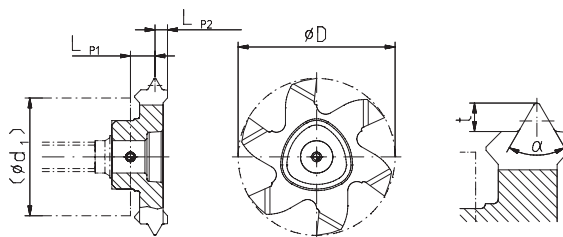
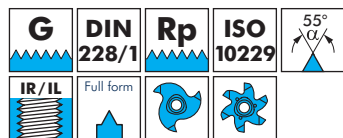
Type	Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	r mm	S ^{max.} mm	Number of teeth	Order No.	
									TINAMATIC	
P16	P1616	1,814-3,175	14-8	16	2,75	1,625	0,35	2,5	6	173906
P25	P2526	3,175-6,35	8-4	26	2,65	2,175	0,6	2,8	6	177427

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

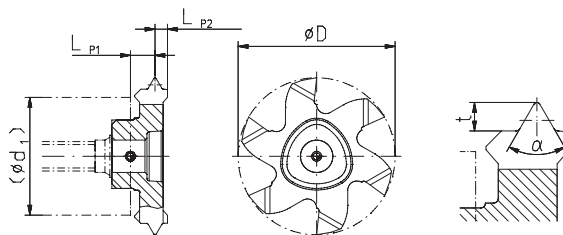
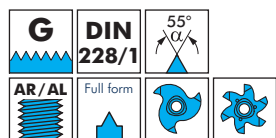
- * Not suited for cutter 177676
- ** Not suited for cutters 123588 and 123590
- *** Not suited for cutter 174314
- **** Not suited for cutter 123613

Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173
- 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 ¾	3	160952
	P1210 *	1,337	19	9,6	2,25	1,2	0,871	G ¾	3	171912
	P1212 *	1,814	14	11,7	2,25	1,2	1,177	G ½ - G ¾	3	160970
	P1212 *	2,309	11	11,7	2,15	1,5	1,319	G 1 - G 6	3	160996
P16	P1616	1,814	14	16	2,15	1,675	1,177	G ½ - G ¾	6	160620
	P1616	1,814	14	16	2,15	1,675	1,177	G ¾ - G ¾	6	142576
	P1616	2,309	11	16	2,75	2,075	1,949	G 1 - G 6	6	142549
P20	P2020	1,814	14	20	3,95	1,725	1,177	G ¾ - G ¾	6	168688
	P2020	2,309	11	20	3,95	1,725	1,949	G 1 - G 6	6	168687
P25	P2526	2,309	11	26	2,15	1,675	1,949	G 1 - G 1½	6	160980
	P2526	2,309	11	26	2,75	2,075	1,949	G 1½ - G 6	6	142600

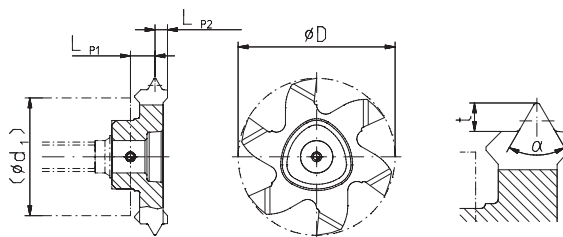
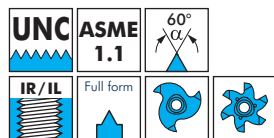


Type		Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210 *	1,337	19	9,6	2,25	1,2	0,871	G ¾ - G ¾	3	171912
	P1212 *	1,814	14	11,7	2,3	1,1	1,178	G ½ - G ¾	3	160943
	P1212 *	2,309	11	11,7	2,25	1,2	1,498	G 1 - G 6	3	161112
P16	P1616	1,814	14	16	2,15	1,675	1,177	G ½ - G ¾	6	142576
	P1616	2,309	11	16	2,75	2,075	1,478	G 1 - G 6	6	142549
	P1618	1,814	14	17,7	3,15	0,95	1,177	G ¾ - G ¾	6	171949
P20	P2020	1,814	14	20	3,95	1,725	1,177	G ¾ - G ¾	6	168688
	P2020	2,309	11	20	3,95	1,725	1,478	G 1 - G 6	6	168687
P25	P2526	2,309	11	26	2,75	2,075	1,478	G 1 - G 6	6	142600

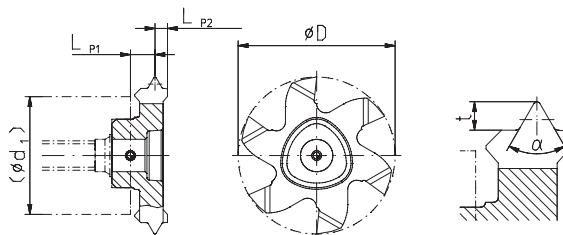
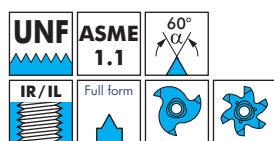
i Taper pipe thread R according to ISO 10229 on request

Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173

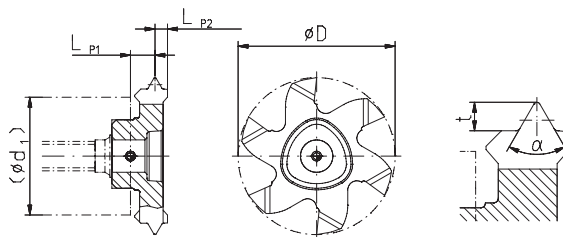
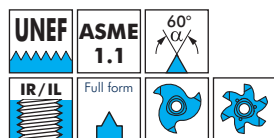


Type		Pitch mm	Pitch/"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No. TINAMATIC
P12	P1210 *	1,954	13	10	2,25	1,2	1,10	UNC ½ - 13	3	192134 NEW
	P1210 *	2,117	12	10	2,25	1,2	1,29	UNC ⅝ - 12	3	171883
	P1211 *	2,309	11	10,5	2,13	1,52	1,35	UNC ⅝ - 11	3	171880
	P1212 *	2,540	10	11,7	2,13	1,52	1,485	UNC ¾ - 10	3	171879
P16	P1616	2,822	9	16	2,05	1,775	1,577	UNC ⅜ - 9	6	172148
P20	P2018 **	3,175	8	18	2,65	2,175	1,809	UNC 1 - 8	6	172149
	P2020 **	3,629	7	20	2,65	2,175	2,043	UNC 1⅛ - 1⅝ - 7	6	172150
P25	P2524	4,233	6	24	4,05	3,275	2,454	UNC 1⅜ - 1⅝ - 6	6	172151
	P2526	5,080	5	26	3,85	3,475	2,979	UNC 1⅝ - 5	6	172152
	P2526 ***	5,644	4,5	26	3,85	3,475	3,289	UNC 2 - 2⅝ - 4½	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 ½ - 20	3	171884
	P1211 *	1,411	18	10,5	2,5	0,95	0,827	UNF ⅝ - 18	3	171885
	P1212	1,588	16	11,7	2,5	0,95	0,945	UNF ¾ - 16	3	171900
P16	P1618	1,814	14	17,7	3,15	0,95	1,071	UNF ⅞ - 14	6	171950
P20	P2020	2,117	12	20	2,15	1,675	1,228	UNF 1 - 12	6	171951

Article conditioned on stock



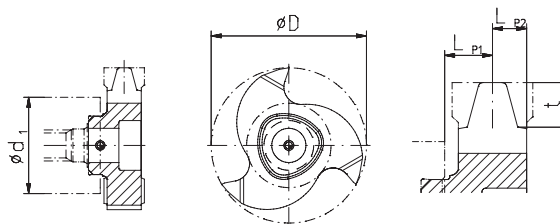
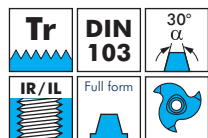
Type		Pitch mm	Pitch /"	D mm	LP1 mm	LP2 mm	t mm	Thread	Number of teeth	Order No.	
										TINAMATIC	
P12	P1210 *	0,907	28	9,6	2,5	0,95	0,556	UNEF 7/16 - 1/2	3	161798	NEW
	P1212	1,058	24	11,7	2,5	0,95	0,649	UNEF 9/16 - 1 1/16	3	161833	NEW
P16	P1616	1,270	20	16	2,05	1,775	0,779	UNEF 3/4 - 1	6	161868	NEW
P20	P2020	1,411	18	20	2,15	1,675	0,865	UNEF 1 1/16 - 1 11/16	6	162008	NEW

* Not suited for cutter 177676
 ** Not suited for cutter 174314
 *** Not suited for cutter 123613

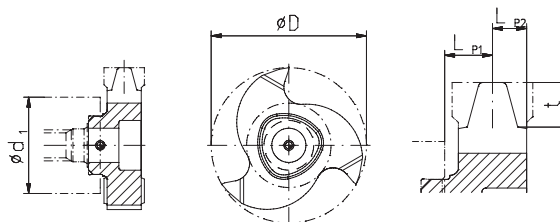
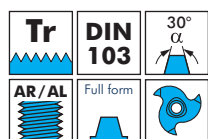
PolyMILL

Thread Milling

- Insert holder see page 27-29
- Cutting data see page 173
- 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	P1210 *	1,5	9,6	2,775	0,575	0,9	Tr 14x1,5	6°	3	160689 NEW
	P1210 *	1,5	9,6	2,775	0,575	0,9	Tr 20x1,5	6°	3	161243 NEW
	P1212 *	2,0	11,7	2,5	1,1	1,25	Tr 16x2 - Tr 20x2	6°	3	177717
	P1211 *	3,0	11,0	2,23	1,42	1,75	Tr 18x3 - Tr 20x3	6°	3	160862
	P1212 *	4,0	12,0	2,15	1,5	2,25	Tr 20x4	6°	3	160308
P16	P1614 **	3,0	14,0	2,3	1,5	1,75	TR 24x3 - Tr 32x3	8°	3	162630
	P1615 **	5,0	15,3	3,0	2,25	2,75	Tr 24x5	0°	3	161652 NEW
	P1615 **	5,0	15,3	3,15	2,1	2,75	Tr 26x5	8°	3	166213
	P1615 **	5,0	15,3	3,15	2,1	2,75	Tr 28x5 - Tr 36x5	8°	3	150365
	P1616 **	6,0	16,2	4,27	3,0	3,5	Tr 30x6 - Tr 32x6	8°	3	182498
	P1616 **	6,0	16,2	4,22	3,03	3,5	Tr 34x6 - Tr 42x6	8°	3	161736
P25	P2524	3,0	24,0	2,6	2,1	1,75	Tr 36x3 - Tr 40x3	8°	3	160972 NEW
	P2524	4,0	24,0	1,85	2,0	2,25	≥ Tr 65x4	8°	3	161124 NEW
	P2525	5,0	25,0	3,2	2,37	2,75	Tr 44x5 - Tr 48x5	8°	3	160872
	P2522 ***	7,0	22,0	4,0	2,65	3,75	Tr 38x7 - Tr 42x7	8°	3	162648
	P2522 ***	7,0	22,0	4,0	2,65	3,75	Tr 44x7	8°	3	161111
	P2525 ***	8,0	25,0	4,75	3,4	4,5	Tr 46x8 - Tr 48x8	8°	3	162257
	P2525 ***	8,0	25,0	5,03	3,13	4,5	Tr 50x8 - Tr 52x8	8°	3	110966
	P2525 ***	9,0	25,0	4,73	3,42	4,75	Tr 55x9 - Tr 60x9	8°	3	160869
	P2525 ***	10,0	25,0	4,65	3,5	5,25	Tr 65x10 - Tr 80x10	8°	3	167236



Typ		Pitch mm	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	Order No. TINAMATIC
P12	P1210 *	1,5	9,6	2,775	0,575	0,90	≥ Tr 8x1,5 External	6°	3	161243 NEW
	P1212 *	2,0	11,7			1,25		6°	3	On request
	P1212 *	3,0	11,7			1,75		6°	3	On request
	P1212 *	4,0	11,7			2,25		6°	3	On request
P16	P1616 **	3,0	16,0			1,75		8° / 6°	3 / 6	On request
	P1616 **	4,0	16,0	2,4	1,63	2,25	≥ Tr 16x4 External	8°	3	161588 NEW
	P1616 **	5,0	16,0			2,75		8° / 6°	3 / 6	On request
	P1616 **	6,0	16,0			3,25		8° / 6°	3 / 6	On request
P25	P2525	4,0	25 / 26			2,25		8° / 6°	3 / 6	On request
	P2525 ***	5,0	25 / 26			2,75		8° / 6°	3 / 6	On request
	P2525 ***	6,0	25 / 26			3,75		8° / 6°	3 / 6	On request
	P2525 ***	7,0	25 / 26			3,75		8° / 6°	3 / 6	On request
	P2525 ***	8,0	25 / 26			4,25		8° / 6°	3 / 6	On request
	P2525 ***	9,0	25 / 26			4,75		8° / 6°	3 / 6	On request
	P2525 ***	10,0	25 / 26			5,25		8° / 6°	3 / 6	On request

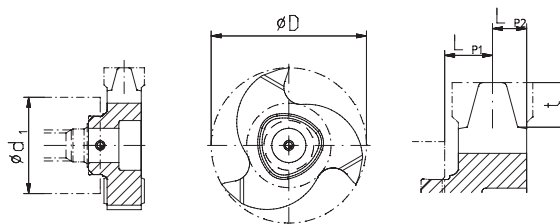
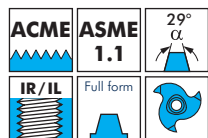
* Not suited for cutter 177676

** Not suited for cutters 123588 and 123590

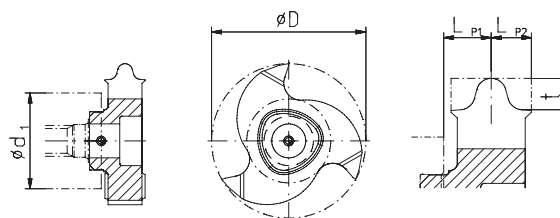
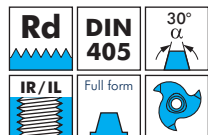
*** Not suited for cutters 123613, 123609 and 123611

Thread Milling

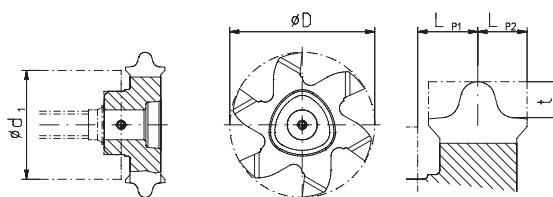
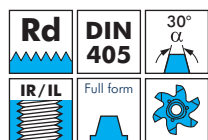
- Insert holder see page 27-29
- Cutting data see page 173
- Conditional deliverable
- Further sizes on request



											Order No.
Typ		Pitch mm	Pitch / "	D mm	LP1 mm	LP2 mm	t mm	Thread	Chip angle	Number of teeth	TINAMATIC
P16	P1616	5,08	5	16	3,02	2,23	2,85	1" - 5Gg - 1⅝" - 5Gg	8°	3	182614
	P1616 *	6,35	4	16	4,04	3,21	3,43	1¼" - 4Gg - 1½" - 4Gg	8°	3	172556
P25	P2524	6,35	4	24	3,9	2,75	3,47	1¼" - 4Gg - 2" - 4Gg	8°	3	162654
	P2525	8,467	3	25	4,65	3,5	4,51	2¼" - 3Gg - 2¾" - 3Gg	8°	3	161935



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	Rd20x½	8°	3	174442
	P1614 *	3,175	8	14	3,15	2,1	1,588	Rd22 x ½	8°	3	161424
	P1615 *	3,175	8	15	2,4	1,9	1,588	Rd 24 x ½ - Rd 26 x ½	8°	3	161156
	P1616	3,175	8	16	2,4	1,9	1,588	Rd 28 x ½ - Rd 32 x ½	8°	3	174421
	P1616	3,175	8	16	2,4	1,9	1,588	Rd 34 x ½ - Rd 38 x ½	8°	3	162544
	P1616 *	4,233	6	16	3,15	2,575	2,117	Rd 40 x ½ - Rd 55 x ½	8°	3	160954
	P1616 *	4,233	6	16	3,15	2,575	2,117	Rd 58 x ½ - Rd 80 x ½	8°	3	161067
	P1616 *	4,233	6	16	3,15	2,575	2,117	Rd 82 x ½ - Rd 100 x ½	8°	3	161110
	P1616 *	6,35	4	16	4,15	3,125	3,175	Rd 105 x ¾ - Rd 200 x ¾	8°	3	160995



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 28x½	6°	6	175137
P25	P2526	4,233	6	26	3,85	3,4	2,117	Rd 65x½	6°	6	172430
	P2526	6,35	4	26	3,85	3,4	3,175	Rd 105 x¼ - Rd 120x¼	6°	6	168288

i Knuckle thread acc. to DIN 20400 on request