


















Symbols

	Type designation		Thread standard
	Steel shaft without clamping surface		Thread with undercut (Trio-Cut)
	Steel shaft with Weldon clamping surface		for right- and left hand internal thread for left hand thread modify your NC-program!
	Solid carbide shaft without clamping surface		for right- and left hand external thread for left hand thread modify your NC-program!
	Solid carbide shaft with Weldon clamping surface		Full form thread milling
	Cutter with tightening thread		Partial form thread milling
	Smallest necessary bore-diameter		Point angle
	Internal coolant supply		Thread standard
	Number of inserts		

Short Descriptions

Alpha (α)	Point angle of milling insert	F	Width of trailing chamfer
A	Groove width	HP	Insert height
A ₁	Basic width in the Groove	HS	Slider height (Axial grooving tool)
B _{f6}	Insert holder width of axial grooving tool	L	Length of milling tool
B _{H7}	Groove width of axial grooving tool	L ₁	Clamping length of milling tool
B _w	Tool width of axial grooving tool	L _G	Usable thread length at the multi-tooth thread milling
C	Chamfer width	L _{HA}	Holder length
D	Cutting diameter	L _{P1}	Insert height of milling body – edge
d ₁	Milling body diameter (front)	L _{P2}	Insert height of edge – interfering contour
d ₂	Large diameter of milling body	L _{PF}	Length of fitting face
d _{g6}	Fitting face diameter of threaded milling tool	L _S	Shaft length – clamping length (Depth)
D _{h6}	Shaft diameter of milling body (Arbor)	M	Thread size
D _P	Flight circle of insert	P	Pitch
D _R	Nominal diameter of concave radius insert	R	Radius (general/common)
E	Width blank insert		

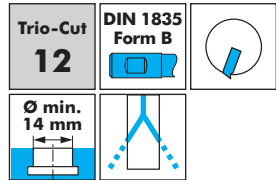
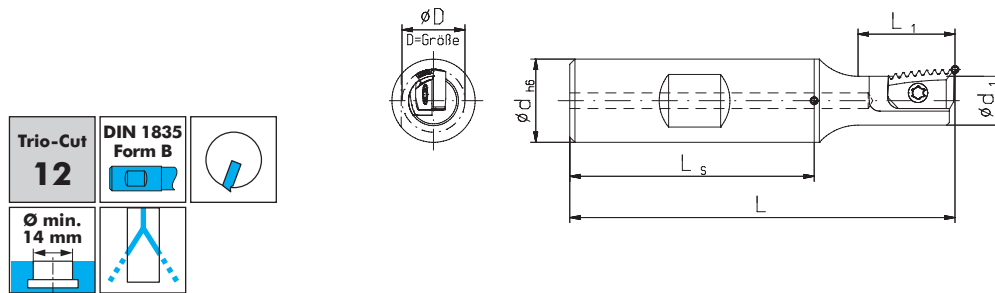
Formula for Tool Lengths

$$L_{WKZ} = L_{GK} + L_1 + L_{P1} (+L_{P2})$$

TrioCUT

Circular Milling Tools

- Cutting data see page 189
- Carbide grades see page 123
- Inserts see below



Order No.	Bore Ø min.	D mm	d h6 mm	d1 mm	L mm	L1 mm	Shaft	Spare part No.	
								T8 IP Screw-driver	Screw
123620	14	12	16	9,4	74	18	Steel	111656	115567

Screw torque max. 1,1 Nm

Circular Milling Inserts

Note:
Type 12 milling tools can only be used with type 12 milling inserts!



M				DIN 13		IR/IL		Full form		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.
60° α															
										1,0	7,5	11,0	12	0,5	142594
										1,5	7,5	10,5	8	0,75	142694

G		DIN 228/1		BSW		BSF		Pitch mm	Pitch/°	HP mm	LG* mm	Teeth	LP2* mm	Order No.
IR/IL		AR/AL		Full form										
								1,337	19	7,5	9,07	9	0,65	142688
								1,814	14	7,5	9,07	6	0,9	142632

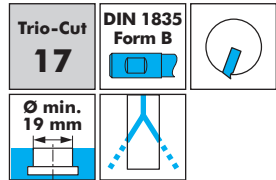
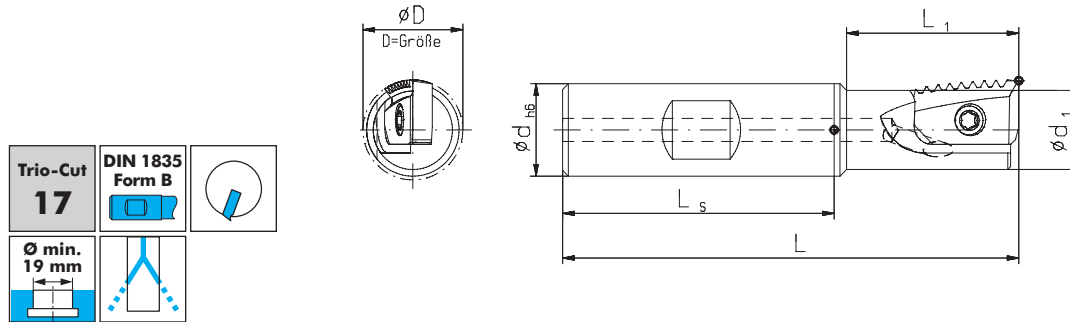
PG		DIN 40430		IR/IL		AR/AL		Pitch mm	Pitch/°	HP mm	LG* mm	Teeth	LP2* mm	Thread	Order No.
Full form															
80° α								1,411	18	7,5	11,28	9	0,7	9-16	142679
								1,588	16	7,5	11,11	8	0,8	21-48	142664

* The length "LG" and "LP2" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Tools

- Cutting data see page 189
- Carbide grades see page 123
- Inserts see page 42-43



Spare part No.

T15 IP Screw-driver	Screw
111671	115628
111671	115628

Screw torque max. 3,8 Nm

Order No.	Bore \varnothing min.	D mm	d _{h6} mm	d ₁ mm	L mm	L ₁ mm	Shaft
123631	19	17	16	13,7	79	30	Steel
123633	19	17	20	13,7	92	30	Steel

Circular Milling Inserts

Note:
Type 17 milling tools can only be used with type 17 milling inserts!



M		DIN 13	IR/IL		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.		
Full form		60° α			TINAMATIC							
					1,0	11	16,0	17	0,55	142731		
					1,5	11	16,5	12	0,75	142720		
					2,0	11	16,0	9	1,0	142651		
M		DIN 13	AR/AL		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.		
Full form		60° α			TINAMATIC							
					1,5	11	16,5	12	0,75	142721		
M		DIN 13	IR/IL		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	R mm	Order No.	
Full form		60° α			TINAMATIC							
					1,0	11	14,0	15	3,6	0,4	142668	
					1,5	11	13,5	10	4,1	0,4	142650	
					2,0	11	12,0	7	3,6	0,4	142672	
G		DIN 228/1	BSW		Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	Thread	Order No.
Full form		55° α	BSF		TINAMATIC							
					2,309	11	11	16,16	8	1,16	all	142685
					1,814	14	11	16,33	10	0,95	5/8-3/4-7/8"	142732

* The length "LG" and "LP2" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Inserts



Trio-Cut
17

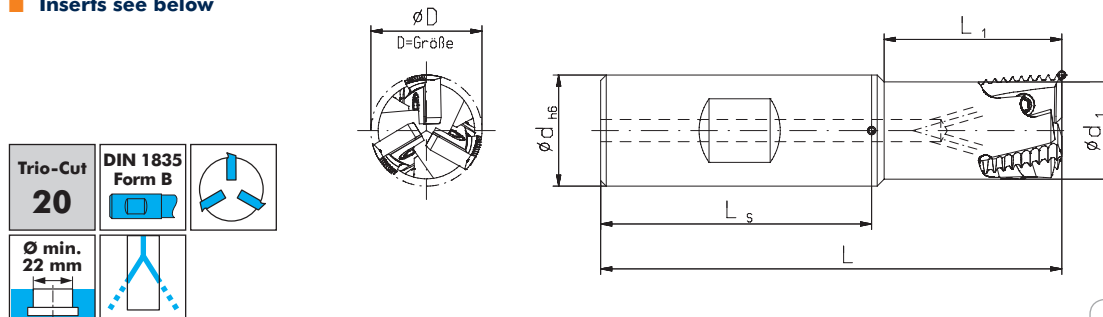
								Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	Thread	Order No. TINAMATIC	
								1,814	14	11	16,33	10	0,95	G 1/2"	142652	
								Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	R mm	Thread	Order No. TINAMATIC
								2,309	11	11	11,54	6	4,6	0,4	all	142725
								1,814	14	11	12,69	8	3,5	0,4	5/8-3/4-7/8"	142717
								Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	R mm	Order No. TINAMATIC	
								1,814	14	11	12,69	8	3,5	0,4	142669	
								Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	Thread	Order No. TINAMATIC	
								1,411	18	11	16,92	12	0,7	11-16	142674	
								1,588	16	11	15,88	11	0,8	21-48	142675	
								Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	R mm	Thread	Order No. TINAMATIC
								1,411	18	11	14,1	11	3,9	0,4	11-16	142684
								1,588	16	11	12,7	9	3,7	0,4	21-48	142714

* The length "LG" and "LP2" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Tools

- Cutting data see page 189
- Carbide grades see page 123
- Inserts see below



Trio-Cut 20
DIN 1835 Form B

\varnothing min. 22 mm

Order No.	Bore \varnothing min.	D mm	d _{h6} mm	d ₁ mm	L mm	L ₁ mm	Shaft	Spare part No.	
								T8 IP Screw-driver	Screw
123622	22	20	20	17,5	83	32	Steel	111656	115567

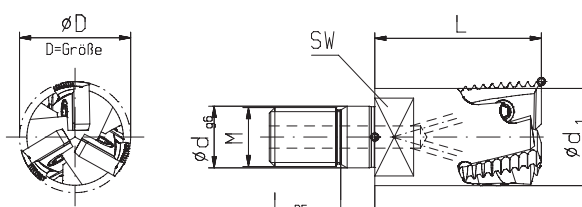
Screw torque max. 1,1 Nm

- Tightening torques see page 33

! Please adapt cutting data to overhangs length

Trio-Cut 20

\varnothing min. 22 mm



Order No.	Bore \varnothing min.	D mm	d _{g6} mm	M	L _{PF} mm	d ₁ mm	L mm	Shaft	Spare part No.	
									T8 IP Screw-driver	Screw
123623	22	20	10,5	10	5	17,5	21	Steel	111656	115567

Screw torque max. 1,1 Nm

Circular Milling Inserts

Trio-Cut 20

Note:
Type 20 milling tools can only be used with type 20 milling inserts!

M	DIN 13	IR/IL	Full form	60°	Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.
										TINAMATIC
					1,0	7,5	12,0	13	0,5	142690
					1,5	7,5	10,5	8	0,75	142633

G	DIN 228/1	BSW	IR/IL	AR/AL	BSF	Full form	55°	Pitch mm	Pitch/°	HP mm	LG* mm	Teeth	LP2* mm	Thread	Order No.
															TINAMATIC
								1,814	14	7,5	9,07	6	0,9		142707
								1,814	14**	7,5	9,07	6	0,9	G 3/4"	142666

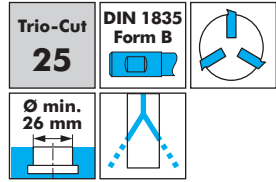
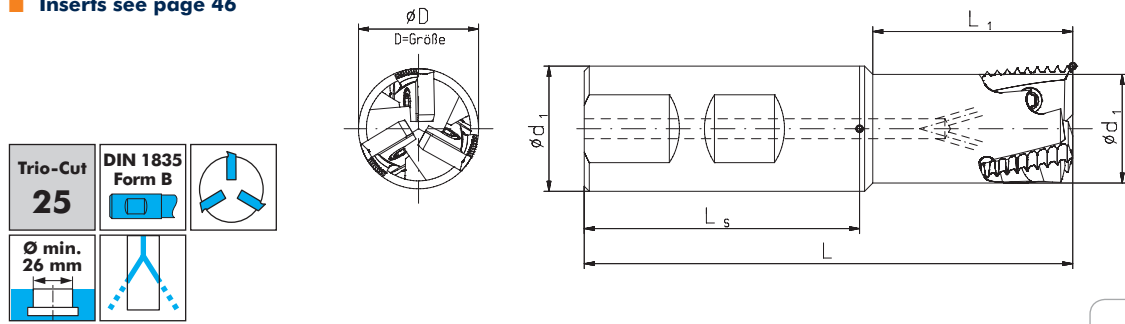
** for internal threads only

* The length "LG" and "LP2" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Tools

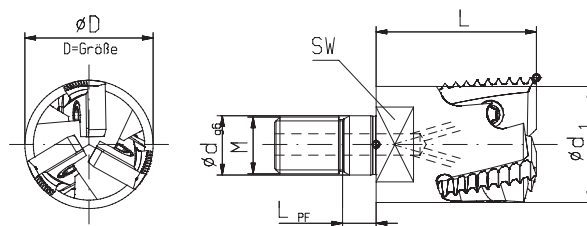
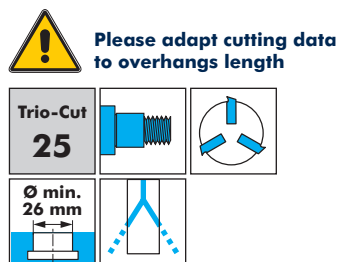
- Cutting data see page 189
- Carbide grades see page 123
- Inserts see page 46



Order No.	Bore Ø min.	D mm	dh6 mm	d1 mm	L mm	L1 mm	Shaft	Spare part No.	
								T15 IP Screw-driver	Screw
123638	26	25	25	21,7	107,6	50	Steel	111671	115628
123639	26	25	25	21,7	142,6	85	Heavy metal	111671	115628

Screw torque max. 3,8 Nm

- Tightening torques see page 33



Order No.	Bore Ø min.	D mm	dg6 mm	M	L PF mm	d1 mm	L mm	Spare part No.	
								T15 IP Screw-driver	Screw
166204	26	25	10,5	10	5	21,7	30	111671	115628

Screw torque max. 3,8 Nm

i TrioCUT 25 inserts see next page

* The length "L_G" and "L_{P2}" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Inserts



Note:
Type 25 milling tools can only be used with type 25 milling inserts!

Trio-Cut
25

M		DIN 13	Diagram		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.		
IR/IL	Full form				1,0	11	16,0	17	0,5	142754		
					1,5	11	16,5	12	0,75	142722		
					2,0	11	16,0	9	1,11	142723		
M		DIN 13	Diagram		Pitch mm	HP mm	LG* mm	Teeth	LP2* mm	Order No.		
AR/AL	Full form				1,5	11	16,5	12	0,75	142772		
G		DIN 228/1	BSW	Diagram		Pitch mm	Pitch/"	HP mm	LG* mm	Teeth	LP2* mm	Order No.
IR/IL	AR/AL		BSF			2,309	11	11	16,16	8	1,16	142743
Full form			1,814			14	11	16,33	10	0,95	142798	

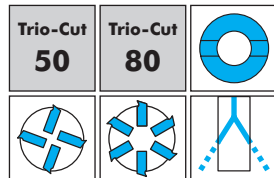
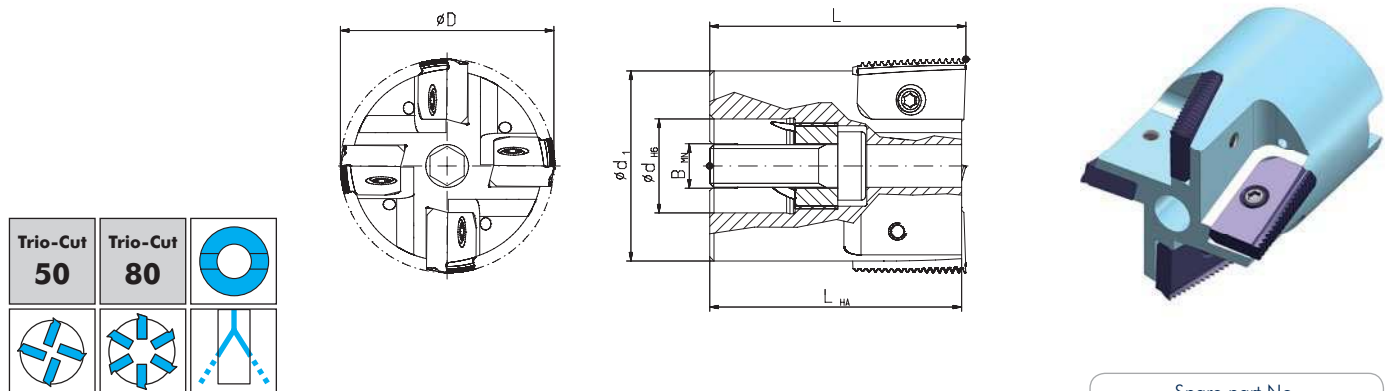


* The length "LG" and "LP2" of the Thread Milling Insert are measured when the insert is clamped in the holder.

TrioCUT

Circular Milling Tools

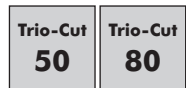
- Cutting data see page 189
- Carbide grades see page 123
- Inserts see below



Order No.	Size	D mm	d _{h6} mm	B _{MN} mm	d ₁ mm	L mm	L _{HA} mm	Inserts	Spare part No.	
									T15 IP Screw-driver	Screw
135203 NEW	50	50	22	10,4	44,5	60	59	4	111671	107559
172159 NEW	80	80	32	14,4	75	60	59	6	111671	107559

Screw torque max. 3,8 Nm

Circular Milling Inserts



Hinweis:

Type 50 milling tools can only be used with type 50 milling inserts!

Type 80 milling tools can only be used with type 80 milling inserts!

M DIN 13 IR/IL Full form 60°	Pitch mm	Size	HP mm	LG* mm	Teeth	LP2* mm	Order No.
							TINAMATIC
	1,5	50	18,4	22,5	16	0,75	150114 NEW
	1,5	80	18,4	22,5	16	0,75	148871 NEW
	2,0	80	18,4	22,0	12	1,0	171636 NEW