

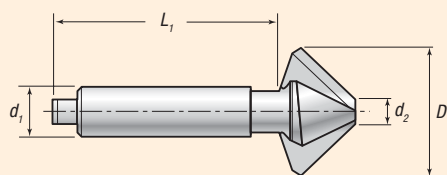
Countersinks Type 100, with cylindrical shanks

GRANLUND
Tools



Ø mm	100T				100TT			100TTC			105T
	HSS				HSS TiN			HSS TiCN			HSS Co 5%
	Tol.x9 60°	Tol.x9 80°	Tol.x9 90°	Tol.x9 120°	Tol.x9 60°	Tol.x9 80°	Tol.x9 90°	Tol.x9 60°	Tol.x9 80°	Tol.x9 90°	Tol.x9 90°
	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
4,3			100T9-04,3								
5,0			100T9-05,0								
6,0			100T9-06,0								
6,3			100T9-06,3				100TT9-06,0			100TTC9-06,0	105T9-06,0
6,5		100T8-06,5	100T9-06,5				100TT9-06,3			100TTC9-06,3	105T9-06,3
7,0			100T9-07,0								
7,3			100T9-07,3								
8,0	100T6-08,0	100T8-08,0	100T9-08,0				100TT9-08,0			100TTC9-08,0	105T9-08,0
8,3			100T9-08,3				100TT9-08,3			100TTC9-08,3	105T9-08,3
8,6			100T9-08,6								
9,4			100T9-09,4								
10,0	100T6-10,0	100T8-10,0	100T9-10,0	100T12-10,0	100TT6-10,0	100TT8-10,0	100TT9-10,0	100TTC6-10,0	100TTC8-10,0	100TTC9-10,0	105T9-10,0
10,4		100T8-10,4	100T9-10,4				100TT9-10,4			100TTC9-10,4	105T9-10,4
11,5			100T9-11,5								
12,0	100T6-12,0	100T8-12,0	100T9-12,0		100TT6-12,0		100TT9-12,0	100TTC6-12,0		100TTC9-12,0	105T9-12,0
12,4		100T8-12,4	100T9-12,4				100TT9-12,4			100TTC9-12,4	105T9-12,4
13,4			100T9-13,4								
15,0			100T9-15,0				100TT9-15,0			100TTC9-15,0	105T9-15,0
16,0	100T6-16,0	100T8-16,0	100T9-16,0	100T12-16,0	100TT6-16,0		100TT9-16,0	100TTC6-16,0		100TTC9-16,0	
16,4			100T9-16,4								
16,5			100T9-16,5				100TT9-16,5			100TTC9-16,5	105T9-16,5
18,0			100T9-18,0								
19,0			100T9-19,0								
20,0	100T6-20,0	100T8-20,0	100T9-20,0	100T12-20,0	100TT6-20,0	100TT8-20,0	100TT9-20,0	100TTC6-20,0	100TTC8-20,0	100TTC9-20,0	
20,5			100T9-20,5				100TT9-20,5			100TTC9-20,5	105T9-20,5
22,0			100T9-22,0								
23,0			100T9-23,0								
25,0	100T6-25,0	100T8-25,0	100T9-25,0	100T12-25,0	100TT6-25,0	100TT8-25,0	100TT9-25,0	100TTC6-25,0	100TTC8-25,0	100TTC9-25,0	105T9-25,0
26,0			100T9-26,0								
28,0			100T9-28,0								
30,0	100T6-30,0	100T8-30,0	100T9-30,0	100T12-30,0	100TT6-30,0	100TT8-30,0	100TT9-30,0	100TTC6-30,0	100TTC8-30,0	100TTC9-30,0	105T9-30,0
31,0			100T9-31,0								
34,0			100T9-34,0								
35,0			100T9-35,0				100TT9-35,0			100TTC9-35,0	105T9-35,0
37,0			100T9-37,0								
40,0	100T6-40,0	100T8-40,0	100T9-40,0				100TT9-40,0			100TTC9-40,0	105T9-40,0

Dimension table




Type 100 60°, 80°, 90°	D x9	d ₁	d ₂	L ₁
T, TT, TTC	4,3 - 8,3	6,0	1,5	40
TR, TRTC	8,6 - 13,4	6,0	2,0	40
THS	15,0 - 19,0	10,0*	3,0	45
	20,0 - 31,0	10,0*	4,0	45
	34,0 - 40,0	16,0	8,0	50
100TL	12,0 - 13,4	10,0*	2,0	104
	15,0 - 19,0	10,0*	3,0	106
	20,0 - 30,0	10,0*	4,0	106
	12,0 - 15,0	6,0	4,0	40
100TH	16,0 - 30,0	10,0*	4,0	45
	40,0	16,0	8,0	50
100E	8,0 - 20,0	6,0	1,0	30
	25,0 - 30,0	10,0*	2,0	45
100T12 / 105T9	06,0 - 06,3	5,0		
	08,0 - 10,4	6,0		
	12,0 - 12,4	8,0		
	15,0 - 25,0	10,0		
	30,0	12,0		
	35,0 - 40,0	16,0		

* Cylindrical shank with 3 facets.

Countersinks Type 100, with cylindrical shanks




Ø mm	100TR	100TRTC	100TH		100THS	100TL	100E	100TG
	for Stainless steel	for Stainless steel						
	HSS	HSS TiCN	Carbide K10	Carbide K10	Solid Carbide K20	HSS	HSS	HSS
	Tol.x9 90°	Tol.x9 90°	Tol.x9 60°	Tol.x9 90°	Tol.x9 90°	Tol.x9 90°	Tol.x9 90°	Tol.x9 90°
	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.
8,0	100TR9-08,0	100TRTC9-08,0			100THS9-06,3		100E9-08,0	
8,3	100TR9-08,3	100TRTC9-08,3			100THS9-08,3			
10,0	100TR9-10,0	100TRTC9-10,0					100E9-10,0	
10,4	100TR9-10,4	100TRTC9-10,4			100THS9-10,4			
12,0	100TR9-12,0	100TRTC9-12,0		100TH9-12,0		100TL9-12,0	100E9-12,0	100TG9-12,0
12,4	100TR9-12,4	100TRTC9-12,4			100THS9-12,4			
15,0	100TR9-15,0	100TRTC9-15,0						
16,0	100TR9-16,0	100TRTC9-16,0	100TH6-16,0	100TH9-16,0		100TL9-16,0	100E9-16,0	
16,5	100TR9-16,5	100TRTC9-16,5			100THS9-16,5			
20,0	100TR9-20,0	100TRTC9-20,0	100TH6-20,0	100TH9-20,0		100TL9-20,0	100E9-20,0	100TG9-20,0
20,5	100TR9-20,5	100TRTC9-20,5						
25,0	100TR9-25,0	100TRTC9-25,0	100TH6-25,0	100TH9-25,0		100TL9-25,0	100E9-25,0	
30,0	100TR9-30,0	100TRTC9-30,0	100TH6-30,0	100TH9-30,0		100TL9-30,0	100E9-30,0	100TG9-30,0
35,0	100TR9-35,0	100TRTC9-35,0						
40,0	100TR9-40,0	100TRTC9-40,0		100TH9-40,0				100TG9-40,0



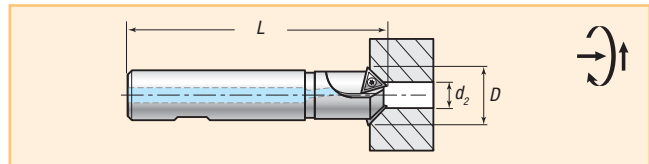
FV 90°, Chamfer and face milling tool

D mm	Part No.	Weldon Shank mm	d _{min} mm	L mm	Chamfers maximum depth mm	No. of inserts
12,0	FV9-12,0	16	6,0	90	5,0	1
12,4	FV9-12,4	16	6,0	90	5,0	1
16,0	FV9-16,0	16	8,0	90	7,5	1
16,5	FV9-16,5	16	8,0	90	7,5	1
20,0	FV9-20,0	20	8,5	100	10,0	2
20,5	FV9-20,5	20	8,5	100	10,0	2
25,0	FV9-25,0	20	13,0	100	12,0	2
30,0	FV9-30,0	20	18,0	100	12,0	2



Inserts for FV

Type of insert	Inserts for FV			
Type of tool D mm	Size of insert	Part No.	Part No.	Radius mm
FV 12,0 - 16,5	07	TPMT-07T	TPMR-07T	0,4
	07		TPGR-07T	0,4
	07		TPMR-07H	0,4
FV 20,0 - 30,0	10	TPMT-10T	TPMR-10T	0,4
	10		TPGR-10T	0,4
	10		TPMR-10H	0,4




- Carbide quality PK40. All inserts are coated in several layers (TiCN-TiC-TiN).
- The GRANLUND inserts have special chipbreaking angel for optimum chip control.

Cutting data for Chamfering

Material	Speed	Feed	Material	Speed	Feed
Steel <450 N/mm ²	75 - 120 m/min	0,1 - 0,5 mm/rev.	Cast Iron	80 - 110 m/min	0,1-0,5 mm/rev.
Steel <600 N/mm ²	65 - 110 m/min	0,1 - 0,4 mm/rev.	Cast Aluminium	80 - 150 m/min	0,1-1,0 mm/rev.
Steel <1000 N/mm ²	55 - 100 m/min	0,1 - 0,3 mm/rev.			

Cutting data for face milling = 1,5 x Cutting data for Chamfering.



100TSK/100TRSK*		100TB					100TTSK**		
Sets type	Type of Counterbores	Composition: Countersinks type 100 90° HSS - Ø mm							Part No.
100TSK	100T	10,0	16,0	20,0	25,0	30,0			100TSK
100TB**	100T	6,3	8,3	10,4	12,4	16,5	20,5	25,0	100TB
100TRSK*	100TR	10,0	16,0	20,0	25,0	30,0			100TRSK
100TTSK	100TT (TiN)	10,0	16,0	20,0	25,0	30,0			100TTSK

* For stainless. **According to DIN 74, Form B fine.