



General Product Catalogue

TURNING



MILLING



DRILLING



GROOVING



SLOT



BORING



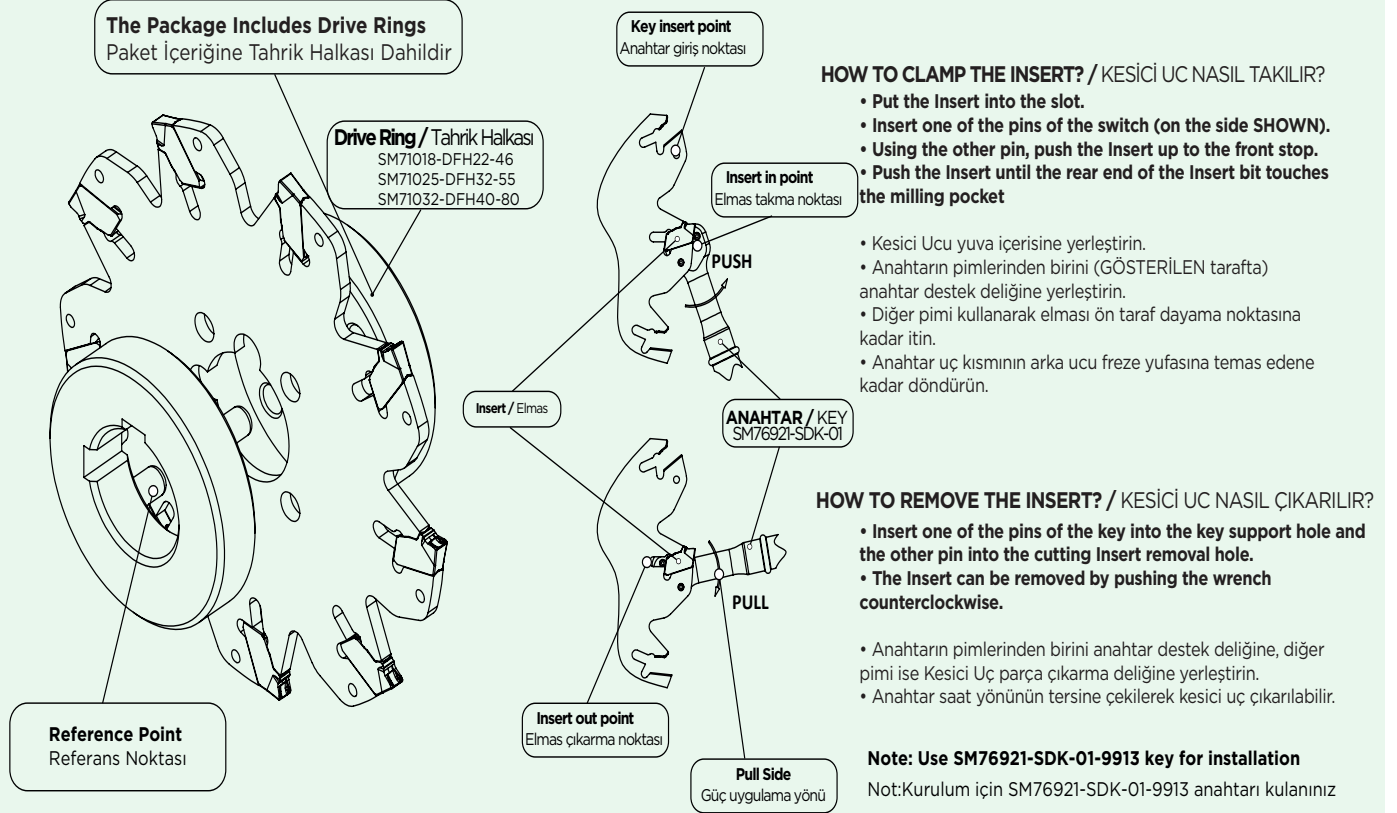
PANAS Tools s.r.o., 95 8 54 Hradište 371
Tel.: 038/7496764-5, email: info@panas.sk
www.panas.sk

Slot & Chamfering Tools

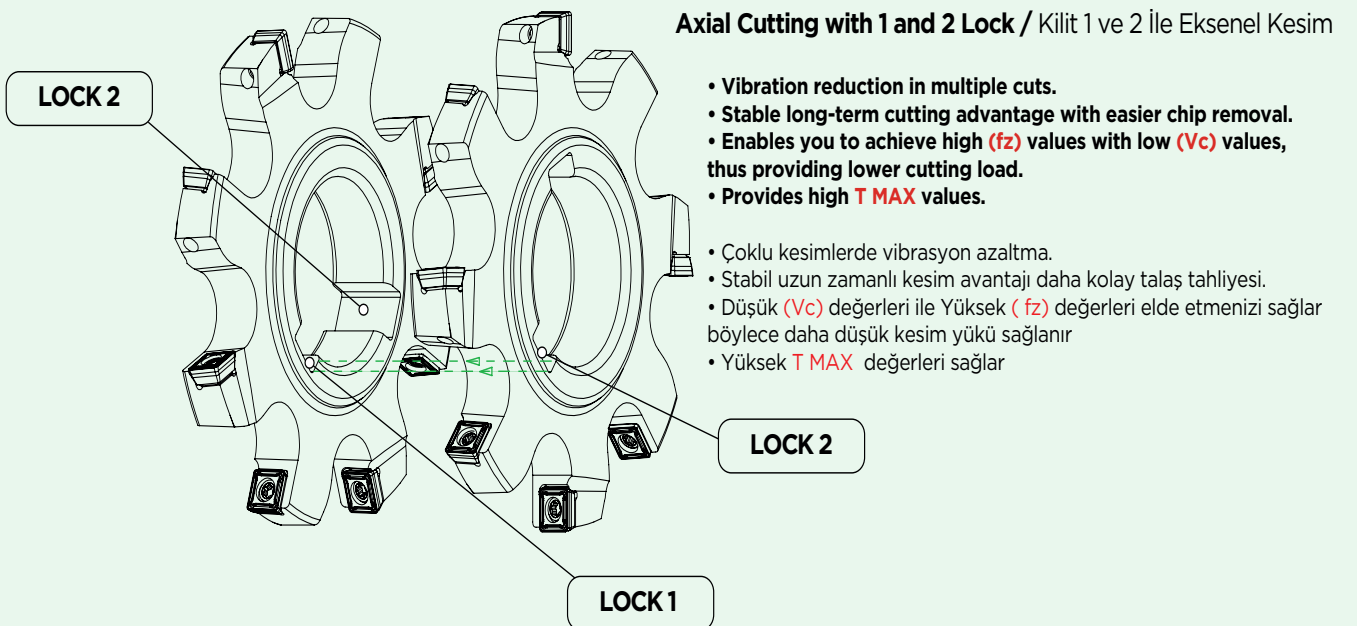


- ▶ T Slot Mills
- ▶ Disc Mills
- ▶ Chamfering Tools
- ▶ Dove Mills
- ▶ Adjustable Boring Bars

Insert Assembly Application Kesici Uç Montaj Uygulaması

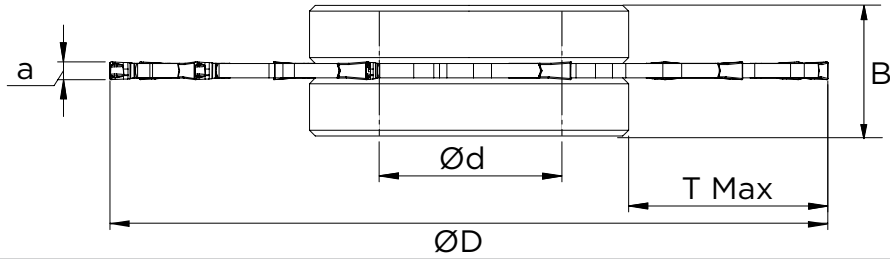


Advantages of Axial Cutting Disc Milling 2nd Lock Eksenel Kesim Disk Freze 2. Kilitleme Avantajları

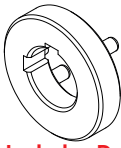
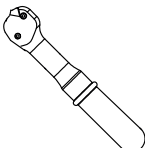




**The Package Includes Drive Rings
Paket İçeriğine Tahrir Halkası Dahildir**

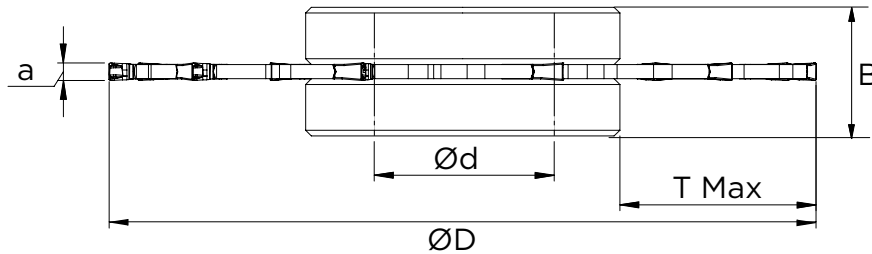


Ordering Code	Item Designation		Dimensions (mm)						Master Insert*
	SSDF SP 2C / 3C / 4C DISC MILLING	POWER SERIES	D	a	d	B	Z	T Max	
SM70875	SSDF SP2C D80 d22 Z07-T17	✓	80	2	22	32	7	17	SP200
SM70882	SSDF SP2C D100 d22 Z09-T27	✓	100	2	22	32	9	27	
SM70912	SSDF SP3C D80 d22 Z07-T17	✓	80	3	22	33	7	17	SP300
SM70929	SSDF SP3C D100 d22 Z09-T27	✓	100	3	22	33	9	27	
SM70936	SSDF SP3C D125 d32 Z11-T35	✓	125	3	32	41	11	35	
SM70943	SSDF SP3C D160 d32 Z14-T52.5	✓	160	3	32	41	14	52.5	
SM70950	SSDF SP3C D200 d40 Z18-T60	✓	200	3	40	43	18	60	SP400
SM70967	SSDF SP4C D80 d22 Z06-T20	✓	80	4	22	34	6	17	
SM70974	SSDF SP4C D100 d22 Z08-T30	✓	100	4	22	34	8	30	
SM70981	SSDF SP4C D125 d32 Z10-T35	✓	125	4	32	42	10	35	
SM70998	SSDF SP4C D160 d32 Z13-T52.5	✓	160	4	32	42	13	52.5	
SM71001	SSDF SP4C D200 d40 Z17-T60	✓	200	4	40	44	17	60	

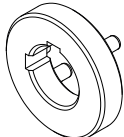
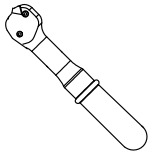
Size Designation	Master Insert*	Spare Parts	
		Drive Ring	Key
		 The Package Includes Drive Rings Paket İçeriğine Tahrir Halkası Dahildir	
D80 - D100	SP200	DFH22-46	SDK-01-9913
D80 - D200	SP300	DFH32-55	
D80 - D200	SP400	DFH40-80	



**The Package Includes Drive Rings
Paket İçeriğine Tahrir Halkası Dahildir**

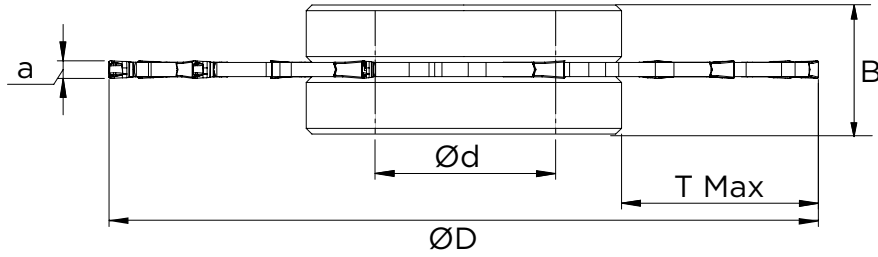


Ordering Code	Item Designation		Dimensions (mm)						Master Insert*
	SSDF 151.2 2C / 3C / 4C DISC MILLING	POWER SERIES	D	a	d	B	Z	T Max	
SM79212	SSDF 151.2 2C D80 d22 Z07-T17	✓	80	2	22	32	7	17	151.2-2C
SM79229	SSDF 151.2 2C D100 d22 Z09-T27	✓	100	2	22	32	9	27	
SM79236	SSDF 151.2 3C D80 d22 Z07-T17	✓	80	3	22	33	7	17	151.2-3C
SM79243	SSDF 151.2 3C D100 d22 Z09-T27	✓	100	3	22	33	9	27	
SM79250	SSDF 151.2 3C D125 d32 Z11-T35	✓	125	3	32	41	11	35	
SM79267	SSDF 151.2 3C D160 d32 Z14-T52.5	✓	160	3	32	41	14	52.5	
SM79274	SSDF 151.2 3C D200 d40 Z18-T60	✓	200	3	40	43	18	60	151.2-4C
SM79281	SSDF 151.2 4C D80 d22 Z06-T20	✓	80	4	22	34	6	17	
SM79298	SSDF 151.2 4C D100 d22 Z08-T30	✓	100	4	22	34	8	30	
SM79304	SSDF 151.2 4C D125 d32 Z10-T35	✓	125	4	32	42	10	35	
SM79311	SSDF 151.2 4C D160 d32 Z13-T52.5	✓	160	4	32	42	13	52.5	
SM79328	SSDF 151.2 4C D200 d40 Z17-T60	✓	200	4	40	44	17	60	

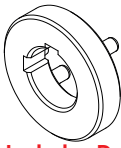
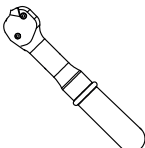
Size Designation	Master Insert*	Spare Parts	
		Drive Ring	Key
		 The Package Includes Drive Rings Paket İçeriğine Tahrir Halkası Dahildir	
D80 - D100	151.2-2C	DFH22-46	SDK-01-9913
D80 - D200	151.2-3C	DFH32-55	
D80 - D200	151.2-4C	DFH40-80	



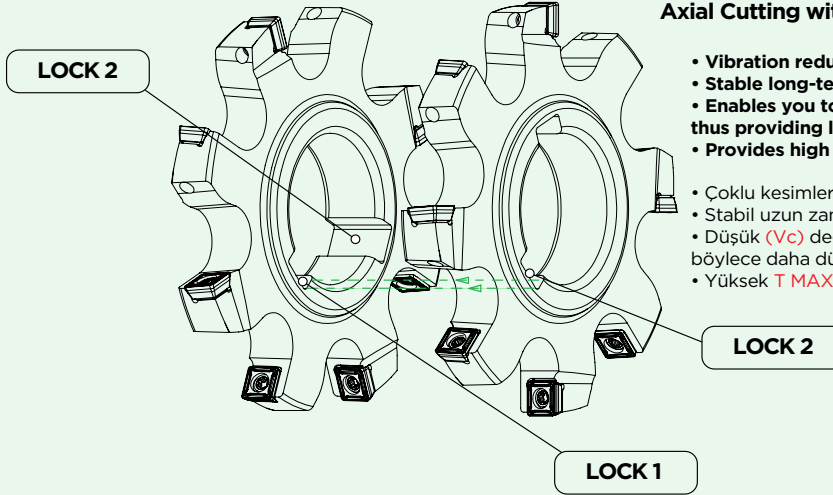
**The Package Includes Drive Rings
Paket İçeriğine Tahrir Halkası Dahildir**



Ordering Code	Item Designation		Dimensions (mm)						Master Insert*
	SSDF SM 2C / 3C / 4C DISC MILLING	POWER SERIES	D	a	d	B	Z	T Max	
SM79335	SSDF SM2C D80 d22 Z07-T17	✓	80	2	22	32	7	17	SM200
SM79342	SSDF SM2C D100 d22 Z09-T27	✓	100	2	22	32	9	27	
SM79359	SSDF SM3C D80 d22 Z07-T17	✓	80	3	22	33	7	17	SM300
SM79366	SSDF SM3C D100 d22 Z09-T27	✓	100	3	22	33	9	27	
SM79373	SSDF SM3C D125 d32 Z11-T35	✓	125	3	32	41	11	35	
SM79380	SSDF SM3C D160 d32 Z14-T52.5	✓	160	3	32	41	14	52.5	
SM79397	SSDF SM3C D200 d40 Z18-T60	✓	200	3	40	43	18	60	SM400
SM79403	SSDF SM4C D80 d22 Z06-T20	✓	80	4	22	34	6	17	
SM79410	SSDF SM4C D100 d22 Z08-T30	✓	100	4	22	34	8	30	
SM79427	SSDF SM4C D125 d32 Z10-T35	✓	125	4	32	42	10	35	
SM79434	SSDF SM4C D160 d32 Z13-T52.5	✓	160	4	32	42	13	52.5	
SM79441	SSDF SM4C D200 d40 Z17-T60	✓	200	4	40	44	17	60	

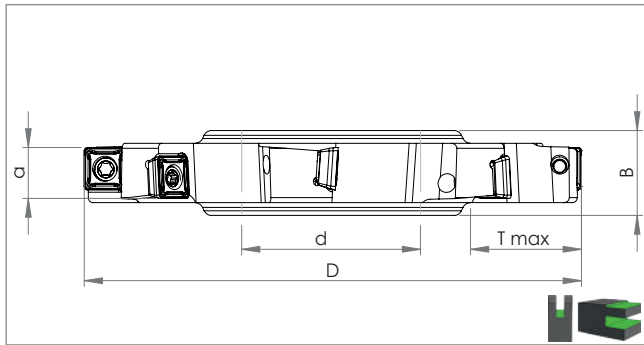
Size Designation	Master Insert*	Spare Parts	
		Drive Ring	Key
		 The Package Includes Drive Rings Paket İçeriğine Tahrir Halkası Dahildir	
D80 - D100	SM200	DFH22-46	SDK-01-9913
D80 - D200	SM300	DFH32-55	
D80 - D200	SM400	DFH40-80	

Advantages of Axial Cutting Disc Milling 2nd Lock Eksenel Kesim Disk Freze 2. Kilitleme Avantajları



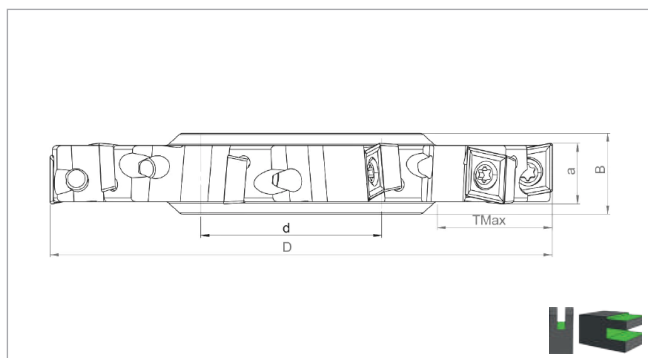
Axial Cutting with 1 and 2 Lock / Kilit 1 ve 2 İle Eksenel Kesim

- Vibration reduction in multiple cuts.
- Stable long-term cutting advantage with easier chip removal.
- Enables you to achieve high (f_z) values with low (V_c) values, thus providing lower cutting load.
- Provides high T_{MAX} values.
- Çoklu kesimlerde vibrasyon azaltma.
- Stabil uzun zamanlı kesim avantajı daha kolay talaş tahliyesi.
- Düşük (V_c) değerleri ile Yüksek (f_z) değerleri elde etmenizi sağlar böylece daha düşük kesim yükü sağlar
- Yüksek T_{MAX} değerleri sağlar



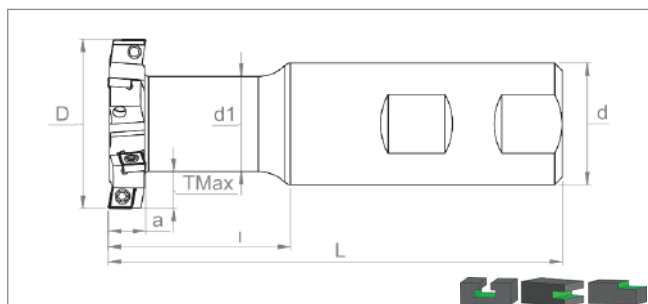
Ordering Code	Item Designation		Dimensions (mm)						Master Insert*
	BSDF SPMG 0502.. / 0602 DISC MILLING	POWER SERIES	D	a	d	B	Z	T_{max}	
SM77669	BSDF SP05 D60x6 d22 Z08 T14	✓	60	6	22	10	8	14	SPMG 0502..
SM77454	BSDF SP05 D80x6 d22 Z10 T17	✓	60	6	22	10	10	17	
SM77461	BSDF SP05 D100x6 d32 Z12 T25	✓	100	6	32	10	12	25	
SM77478	BSDF SP05 D125x6 d40 Z14 T35	✓	125	6	40	10	14	35	
SM77485	BSDF SP05 D160x6 d40 Z18 T52	✓	160	6	40	10	18	52	
SM77492	BSDF SP06 D60x7 d22 Z08 T14	✓	60	7	22	11	8	14	SPMG 0602..
SM77508	BSDF SP06 D80x7 d22 Z10 T19	✓	80	7	22	11	10	19	
SM77515	BSDF SP06 D100x7 d32 Z12 T22.5	✓	100	7	32	11	12	22.5	
SM77522	BSDF SP06 D125x7 d40 Z14 T29	✓	125	7	40	11	14	29	
SM77539	BSDF SP06 D160x7 d40 Z16 T47.5	✓	160	7	40	11	16	47.5	

Size Designation	Master Insert*	Spare Parts		
		Screw	Torx Key	Screw Torque Value
D60 - D160	SPMG 050204	SSV M2x5-9502	STK-T06-9906	0,4
D60 - D160	SPMG 060204	SSV M2.2x5-9503		0,65



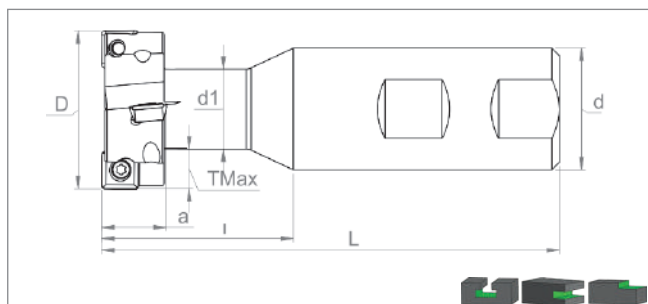
Ordering Code	Item Designation	Dimensions (mm)								Master Insert ^{***}
BSDF CC..0602.. / 09T3.. / 1204.. DISC MILLING		POWER SERIES	D	a	d	B	Z	T _{max}		
SM15395	BSDF CC06 D60x8 d22 Z08 T14	✓	60	8	22	12	8	14	CC.. 0602..	
SM15234	BSDF CC06 D60x10 d22 Z08 T14	✓	60	10	22	14	8	14		
SM15241	BSDF CC06 D80x8 d27 Z10 T19	✓	80	8	27	12	10	19		
SM15258	BSDF CC06 D80x10 d27 Z10 T19	✓	80	10	27	14	10	19		
SM15289	BSDF CC06 D100x8 d32 Z12 T22.5	✓	100	8	32	12	12	22.5		
SM15296	BSDF CC06 D100x10 d32 Z12 T22.5	✓	100	10	32	14	12	22.5		
SM15326	BSDF CC06 D125x8 d40 Z14 T29	✓	125	8	40	12	14	29		
SM15333	BSDF CC06 D125x10 d40 Z14 T29	✓	125	10	40	14	14	29		
SM15388	BSDF CC06 D160x10 d40 Z16 T47.5	✓	160	10	40	14	16	47.5		
SM50136	BSDF CC06 D200x10 d40 Z18 T70	✓	200	10	40	14	18	70		
SM15265	BSDF CC09 D80x12 d27 Z08 T17.5	✓	80	12	27	16	8	17.5	CC.. 09T3..	
SM15272	BSDF CC09 D80x14 d27 Z08 T17.5	✓	80	14	27	18	8	17.5		
SM15302	BSDF CC09 D100x12 d32 Z10 T22.5	✓	100	12	32	16	10	22.5		
SM15319	BSDF CC09 D100x14 d32 Z10 T22.5	✓	100	14	32	18	10	22.5		
SM15340	BSDF CC09 D125x12 d40 Z12 T29	✓	125	12	40	16	12	29		
SM15357	BSDF CC09 D125x14 d40 Z12 T29	✓	125	14	40	18	12	29		
SM15371	BSDF CC09 D160x12 d40 Z14 T45	✓	160	12	40	16	14	45		
SM15364	BSDF CC09 D160x14 d40 Z14 T45	✓	160	14	40	18	14	45		
SM50143	BSDF CC09 D200x12 d40 Z16 T70	✓	200	12	40	16	16	70		
SM50150	BSDF CC09 D200x14 d40 Z16 T70	✓	200	14	40	18	16	70		
SM50167	BSDF CC12 D200x16 d40 Z12 T70	✓	200	16	40	20	12	70	CC.. 1204..	
SM50174	BSDF CC12 D200x18 d40 Z12 T70	✓	200	18	40	22	12	70		

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N-m
D60 - D200	CC.. 0602..	SSV M2.5x7- 9506	STK-T08- 9908	1,0
D80 - D200	CC.. 09T3..	SSV M3.5x10- 9511	STK-T15- 9910	2,7
D200	CC.. 1204..	SSV M5x13- 9519	STK-T20- 9911	3,9



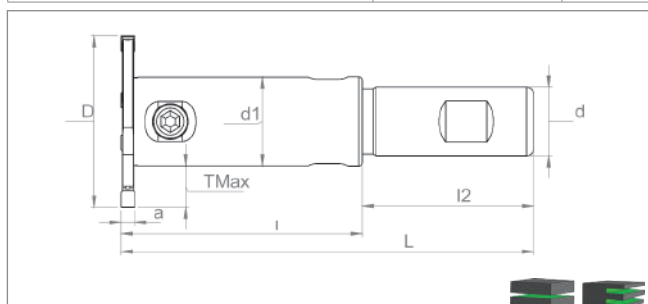
Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
TF90 CC..0602../09T3../1204.. T SLOT MILLS		<i>D</i>	<i>d</i>	<i>d1</i>	<i>L</i>	<i>l</i>	<i>Z</i>	<i>a</i>	<i>T_{max}</i>	
SM14954	TF90 CC06 D17x8 W16 L100 Z02 T3.5	17	16	10	100	25	2	8	3.5	CC.. 0602..
SM15128	TF90 CC06 D20x9 W16 L120 Z02 T4	20	16	10	120	25	2	9	4	
SM58453	TF90 CC06 D21x8 W20 L120 Z04 T3.5	21	20	14	120	40	4	8	3.5	
SM01866	TF90 CC06 D22x8 W20 L120 Z04 T4	22	20	14	120	40	4	8	4	
SM01873	TF90 CC06 D22x10 W20 L120 Z04 T4	22	20	14	120	40	4	10	4	
SM14961	TF90 CC06 D23x10 W20 L120 Z04 T3.5	23	20	16	120	40	4	10	3.5	
SM14978	TF90 CC06 D25x10 W20 L120 Z04 T4.5	25	20	16	120	40	4	10	4.5	
SM22416	TF90 CC06 D26x11 W20 L120 Z04 T5	26	20	16	120	40	4	11	5	
SM14985	TF90 CC06 D30x12 W25 L120 Z04 T6	30	25	18	120	45	4	12	6	
SM14992	TF90 CC06 D32x12 W25 L120 Z04 T6	32	25	20	120	45	4	12	6	
SM15005	TF90 CC06 D35x12 W25 L120 Z04 T7.5	35	25	20	120	45	4	12	7.5	
SM15012	TF90 CC06 D40x12 W25 L120 Z06 T9	40	25	22	120	40	6	12	9	
SM14947	TF90 CC06 D42x12 W25 L120 Z06 T10	42	25	22	120	45	6	12	10	
SM15043	TF90 CC06 D45x08 W32 L120 Z06 T10	45	32	25	120	45	6	8	10	
SM15050	TF90 CC06 D45x10 W32 L120 Z06 T10	45	32	25	120	45	6	10	10	
SM15067	TF90 CC06 D50x08 W32 L120 Z06 T12.5	50	32	25	120	45	6	8	12.5	
SM15074	TF90 CC06 D50x10 W32 L120 Z06 T12.5	50	32	25	120	45	6	10	12.5	
SM15081	TF90 CC06 D55x08 W32 L120 Z08 T15	55	32	25	120	45	8	8	15	
SM15098	TF90 CC06 D55x10 W32 L120 Z08 T15	55	32	25	120	45	8	10	15	
SM15104	TF90 CC06 D60x08 W32 L120 Z08 T17.5	60	32	25	120	45	8	8	17.5	
SM15111	TF90 CC06 D60x10 W32 L120 Z08 T17.5	60	32	25	120	45	8	10	17.5	
SM24090	TF90 CC09 D35x14 W25 L120 Z04 T5	35	25	25	120	45	4	14	5	CC.. 09T3..
NEW SM76044	TF90 CC09 D38x16 W32 L120 Z04 T11	38	32	16	120	45	4	16	11	
SM15029	TF90 CC09 D42x14 W25 L120 Z04 T11	42	25	20	120	45	4	14	11	
SM15036	TF90 CC09 D45x14 W32 L120 Z04 T10	45	32	25	120	45	4	14	10	
NEW SM76051	TF90 CC09 D47x17 W32 L120 Z04 T13.5	47	32	20	100	45	4	17	13.5	CC.. 1204..
SM15135	TF90 CC12 D47x20 W32 L120 Z04 T11	47	32	25	120	55	4	20	11	
NEW SM76068	TF90 CC12 D50x22 W32 L120 Z04 T12.5	50	32	25	100	45	4	22	12.5	
NEW SM76075	TF90 CC12 D55x22 W32 L120 Z04 T15	55	32	25	100	45	4	22	15	

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N·m
D17 - D20	CC.. 0602..	SSV M2.5x6-9505	STK-T08-9908	1,0
D23 - D60		SSV M2.5x7-9506		
D25 - D47	CC.. 09T3..	SSV M3.5x10-9511	STK-T15-9910	2,7
D47 - D55	CC.. 1204..	SSV M5x13-9519	STK-T20-9911	3,9



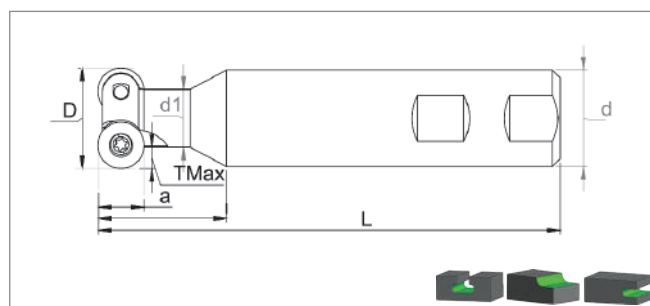
Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
	TF90 <i>SPMG 0502.. / 0904.. / 1104..</i>	<i>D</i>	<i>d</i>	<i>d1</i>	<i>L</i>	<i>I</i>	<i>Z</i>	<i>a</i>	<i>T_{max}</i>	
SM76082	TF90 SP05 D22.5x5 W25 L100 Z04 T12	22.5	25	14	100	40	4	5	12	SPMG 0502..
SM76099	TF90 SP05 D25x5 W25 L100 Z04 T9	25	25	16	100	40	4	5	9	
SM76105	TF90 SP05 D30x5 W25 L100 Z04 T10	30	25	18	100	45	4	5	10	
SM15210	TF90 SP09 D37x16 W32 L120 Z04 T7.5	37	32	21	120	45	4	16	7.5	SPMG 0904..
SM15227	TF90 SP09 D42x17 W32 L120 Z04 T10.5	42	32	21	120	45	4	17	10.5	
SM15203	TF90 SP11 D47x20 W32 L120 Z04 T11.5	47	32	24	120	50	4	20	11.5	SPMG 1104..

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value
D22.5 - D30	SPMG 0502..	SSV M2x5-9502	STK-T06-9906	0,65
D37 - D42	SPMG 0904..	SSV M3.5x10-9511	STK-T15-9910	2,7
D47	SPMG 1104..	SSV M4x10-9514		3,9



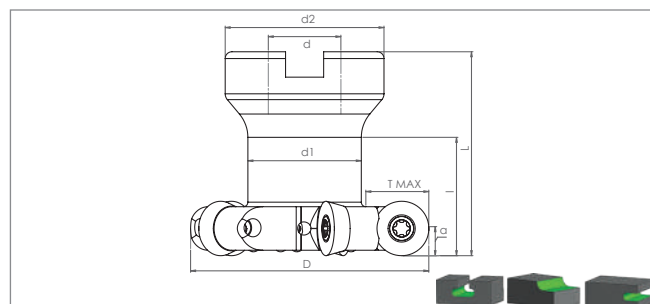
Ordering Code	Item Designation	Dimensions (mm)										Master Insert 
DKT MGM. 3C / 4C / 5C T SLOT MILLS		<i>D</i>	<i>d</i>	<i>d1</i>	<i>l</i>	<i>l2</i>	<i>L</i>	<i>a</i>	<i>Z</i>	<i>T_{max}</i>		
SM20672	DKT K3C D50 W20 L120 Z02 T12	50	20	26	70	50	120	3	2	12	MGM. 3C	
SM20702	DKT K3C D63 W25 L120 Z02 T17	63	25	29	65	55	120	3	2	17		
SM20733	DKT K3C D80 W32 L120 Z02 T20.5	80	32	39	60	60	120	3	2	20.5		
SM20689	DKT K4C D50 W20 L120 Z02 T12	50	20	26	70	50	120	4	2	12	MGM. 4C	
SM20719	DKT K4C D63 W25 L120 Z02 T17	63	25	29	65	55	120	4	2	17		
SM20740	DKT K4C D80 W32 L120 Z02 T20.5	80	32	39	60	60	120	4	2	20.5		
SM20696	DKT K5C D50 W20 L120 Z02 T12	50	20	26	70	50	120	5	2	12	MGM. 5C	
SM20726	DKT K5C D63 W25 L120 Z02 T17	63	25	29	65	55	120	5	2	17		
SM20757	DKT K5C D80 W32 L120 Z02 T20.5	80	32	39	60	60	120	5	2	20.5		

Size Designation	Master Insert**	Spare Parts	
		Clap Screw 	Allen Key
D50	MGM. (3C - 5C)	BKTV-M6x25-9215	SAK-AA5-9904
D63 - D80		BKTV-M8x28-9216	SAK-AA6-9905



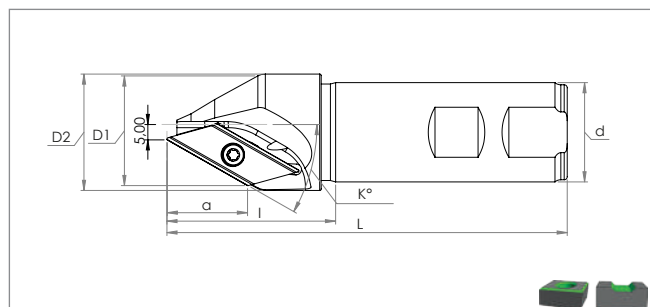
Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
TF <i>RD..0702 / 1003.. / 12T3.. / 1604..</i>		<i>D</i>	<i>d</i>	<i>d1</i>	<i>L</i>	<i>l</i>	<i>Z</i>	<i>a</i>	<i>T_{max}</i>	
SM15159	TF RD0702 D17 W16 L120 Z02 T3.5	17	16	10	120	15	2	7	3.5	RD.. 0702..
SM15166	TF RD0702 D25 W16 L120 Z03 T5	25	16	15	120	12	3	7	5	
SM15142	TF RD0702 D35 W25 L120 Z05 T7.5	35	25	20	120	25	5	7	7.5	
SM15173	TF RD1003 D21 W25 L120 Z02 T4.5	21	25	12	120	30	2	10	4.5	RD.. 1003..
SM15180	TF RD12T3 D26 W25 L120 Z02 T5.5	26	25	15	120	30	2	12	5.5	RD.. 12T3..
SM15197	TF RD1604 D34 W32 L120 Z02 T7	34	32	20	120	40	2	16	7	RD.. 1604..

Size Designation	Master Insert*	Spare Parts		
		Screw	Torx Key	Screw Torque Value
				 N·m
D17	RD.. 0702..	SSV M2.5x6-9505	STK-T08-9908	1,0
D25 - D35		SSV M2.5x7-9506		
D21	RD.. 1003..	SSV M3.5x8-SC-9513	STK-T10-9909	2,7
D26	RD.. 12T3..	SSV M3.5x10-9511	STK-T15-9910	
D34	RD.. 1604..	SSV M4x10-9514		



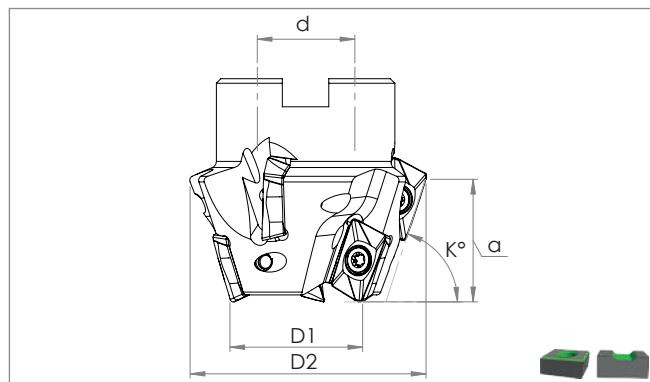
Ordering Code	Item Designation	Dimensions (mm)										Master Insert
TSF RD.. 1003.. / 12T3..			D	d	d1	d2	L	l	Z	a	T _{max}	
SM58408	TSF RD1003 D55 A16 Z05-H	✓	55	16	25	35	45	26	5	5	15	RD.. 1003..
SM58415	TSF RD1003 D65 A22 Z06-H	✓	65	22	30	42	50	30	6	5	17.5	
SM58422	TSF RD1003 D80 A22 Z07-H	✓	80	22	35	50	50	28	7	5	22.5	
SM58439	TSF RD1003 D100 A27 Z08-H	✓	100	27	45	60	50	30	8	5	27.5	
SM54318	TSF RD12T3 D55 A16 Z05-H	✓	55	16	25	35	45	26	5	6	15	RD.. 12T3..
SM54325	TSF RD12T3 D65 A22 Z06-H	✓	65	22	30	42	50	30	6	6	17.5	
SM54332	TSF RD12T3 D80 A22 Z07-H	✓	80	22	35	50	50	28	7	6	22.5	
SM54349	TSF RD12T3 D100 A27 Z08-H	✓	100	27	45	60	50	30	8	6	27.5	

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N-m
D55 - D100	RD.. 1003..	SSV M3.5x8-SC- 9513	STK-T10- 9909	2,7
D55 - D100	RD.. 12T3..	SSV M3.5x10- 9511	STK-T15- 9910	



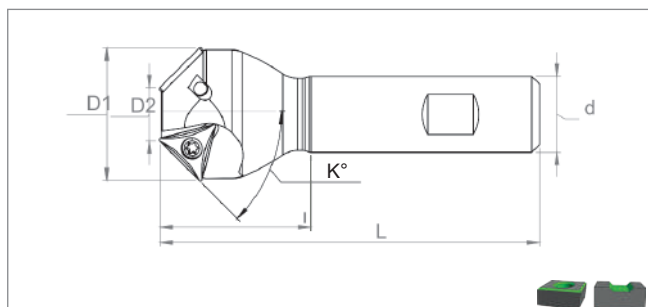
Ordering Code	Item Designation	Dimensions (mm)										Master Insert*
	HLF 30 /45 / 60 XCET 3104 CHAMFERING TOOLS		K°	D	D1	D2	d	Z	L	I	a	
SM71919	HLF30 XC31 5-34 C32 L130 Z01-H	✓	30°	5	34	40	32	1	130	50	25.5	XCET 3104
SM71926	HLF45 XC31 5-46 C32 L130 Z02-H	✓	45°	5	46	56	32	2	130	50	20.5	
SM71933	HLF60 XC31 5-55 C32 L130 Z02-H	✓	60°	5	55	72	32	2	130	50	14.5	

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N-m
D5-34 ~	XCET 3104	SSV M5x13-9519	STK-T20-9911	3,9



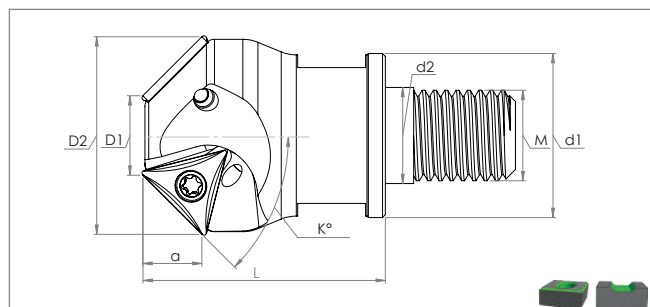
Ordering Code	Item Designation	Dimensions (mm)										Master Insert**
	HFK 15/25/30/45/60/75 APKT 1604.. CHAMFERING TOOLS		K°	D1	D2	Z	Z1*	d	L	a		
SM67141	HFK15 AP16 D90 A27 Z06-H	✓	15°	35	96	6	3	27	50	7	APKT 1604..	
SM67158	HFK25 AP16 D87 A27 Z06-H	✓	25°	35	93	6	3	27	50	12		
SM67165	HFK30 AP16 D85 A27 Z06-H	✓	30°	35	90	6	3	27	50	14		
SM67172	HFK45 AP16 D76 A27 Z06-H	✓	45°	35	80	6	3	27	50	20		
SM67189	HFK50 AP16 D72 A27 Z06-H	✓	50°	35	76	6	3	27	50	22		
SM67196	HFK60 AP16 D64 A22 Z06-H	✓	60°	35	67	6	3	22	50	25		
SM67202	HFK75 AP16 D60 A22 Z06-H	✓	75°	35	50	6	3	22	50	28		

Size Designation	Master Insert**	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N-m
HFK15 - HFK75	APKT 1604..	SSV M4x9x5-9528	STK-T15-9910	3,0



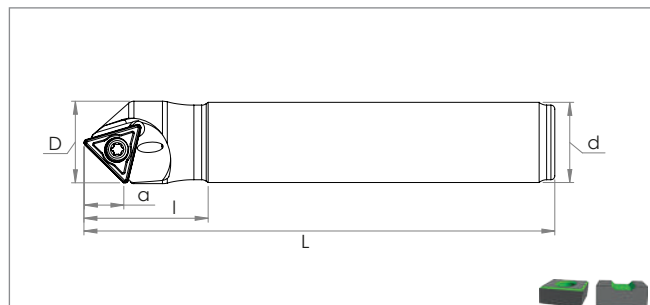
Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
HF 10/15/17.5/20/22.5/25/30/45 TCM. 1102../16T3.. CHAMFERING TOOLS			K°	D2	D1	L	d	Z	I	
SM15401	HF10 TC16 D18-21 W16 L100 Z01	-	10°	18	21	100	16	1	30	TCM. 16T3..
SM15418	HF15 TC16 D17-22 W16 L100 Z01	-	15°	17	22	100	16	1	30	
SM15425	HF17.5 TC16 D17-24 W16 L100 Z01	-	17.5°	17	24	100	16	1	30	
SM15449	HF20 TC16 D12-20 W16 L100 Z01	-	20°	12	20	100	16	1	30	
SM15432	HF20 TC16 D17-26 W16 L100 Z01	-	20°	17	26	100	16	1	30	
SM15456	HF22.5 TC16 D17-28 W20 L100 Z01	-	22.5°	17	28	100	20	1	30	
SM66540	HF22.5 TC16 D17-28 W16 L100 Z01	-	22.5°	17	28	100	16	1	30	
SM15463	HF25 TC16 D17-30 W16 L100 Z01	-	25°	17	30	100	16	1	30	
SM15470	HF30 TC16 D6-20 W16 L100 Z01	-	30°	6	20	100	16	1	30	
SM15487	HF30 TC16 D20-35 W16 L100 Z02	-	30°	20	35	100	16	2	40	
SM15494	HF30 TC16 D30-45 W32 L100 Z03	-	30°	30	45	100	32	3	40	TCM. 06T1..
SM78864	HF45 TC06 D5-14 W10 L100 Z02	-	45°	5	14	100	10	2	20	
SM78871	HF45L TC06 D5-14 W10 L100 Z02	-	45°	5	14	100	10	2	20	TCM. 1102..
SM50099	HF45 TC11 D4-15 W16 L100 Z01-H	✓	45°	4	15	100	16	1	30	
SM15500	HF45 TC11 D4-15 W16 L100 Z01	-	45°	4	15	100	16	1	30	TCM. 16T3..
SM52147	HF45 TC16 D5-26 W16 L100 Z01	-	45°	5	26	100	16	1	30	
SM50105	HF45 TC16 D10-31 W20 L100 Z02-H	✓	45°	10	31	100	20	2	35	
SM15517	HF45 TC16 D10-31 W20 L100 Z02	-	45°	10	31	100	20	2	35	
SM50112	HF45 TC16 D14-35 W20 L100 Z02-H	✓	45°	14	35	100	20	2	40	
SM15524	HF45 TC16 D14-35 W20 L100 Z02	-	45°	14	35	100	20	2	40	
SM50129	HF45 TC16 D22-43 W25 L100 Z03-H	✓	45°	22	43	100	25	3	40	
SM15531	HF45 TC16 D22-43 W25 L100 Z03	-	45°	22	43	100	25	3	40	
SM15548	HF45 TC16 D32-53 W32 L100 Z04	-	45°	32	53	100	32	4	45	
SM51683	HF55 TC16 D16-40 W20 L100 Z03	-	55°	16	40	100	20	3	40	
SM51690	HF62 TC16 D14-40 W20 L100 Z03	-	62°	14	40	100	20	3	40	
SM51706	HF72 TC16 D14-42 W20 L100 Z03	-	72°	14	42	100	20	3	40	

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value N·m
D5-14	TCM. 06T1..	SSV M2x5- 9502	STK-T06- 9906	0,4
D4-15	TCM. 1102..	SSV M2.5x7- 9506	STK-T08- 9908	1,0
D6-20 - ~	TCM. 16T3.	SSV M3.5x10- 9511	STK-T15- 9910	2,7



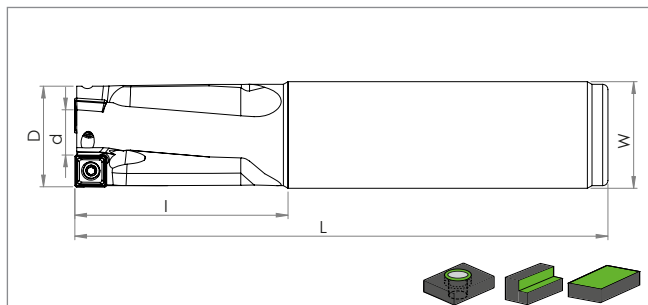
Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
	MHF45 TCM. 1102../16T3.. CHAMFERING TOOLS		K°	D1	D2	L	M	Z	I	
SM72084	MHF45 TC11 D4-15 M08 L25 Z01-H	✓	45°	4	15	25	8	1	17	TCM. 1102..
SM72091	MHF45 TC16 D10-31 M12 L35 Z02-H	✓	45°	10	31	35	12	2	19	TCM. 16T3..
SM72107	MHF45 TC16 D14-35 M16 L43 Z02-H	✓	45°	14	35	43	16	2	23	
SM72114	MHF45 TC16 D22-43 M16 L43 Z03-H	✓	45°	22	43	43	16	3	23	

Size Designation	Master Insert*	Spare Parts		
		Screw	Torx Key	Screw Torque Value
D4-15	TCM. 1102..	SSV M2.5x7-9506	STK-T08-9908	1,0
D10-31 - ~	TCM. 16T3.	SSV M3.5x10-9511	STK-T15-9910	2,7

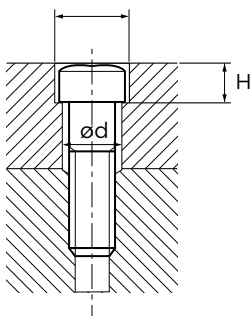


Ordering Code	Item Designation	Dimensions (mm)						Master Insert*
	MFM TWX16R / TWX22R CHAMFERING TOOLS		D	d	L	l	a	
SM71070	MFM TW16 D21.2 C20 L120-H	✓	21.2	20	120	30	10	TWX16R
SM71087	MFM TW16 D21.2 C20 L150-H	✓	21.2	20	150	40	10	TWX22R
SM71094	MFM TW22 D28.8 C25 L120-H	✓	28.8	25	120	30	14	
SM71100	MFM TW22 D28.8 C25 L150-H	✓	28.8	25	150	40	14	

Size Designation	Master Insert*	Spare Parts		
		Screw	Torx Key	Screw Torque Value
D21.2	TWX16R	SSV M4x9-9542	STK-T15-9910	3,9
D28.8	TWX22R			

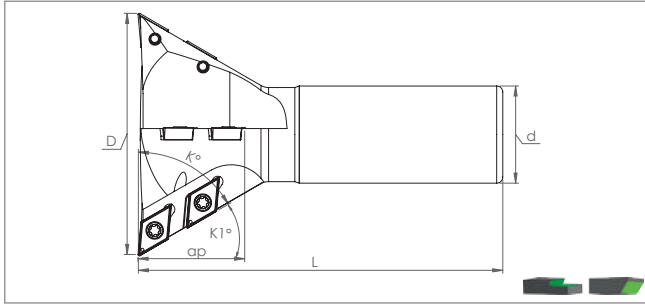


Ordering Code	Item Designation		Dimensions (mm)								Master Insert*
SF BOLT COUNTERSINKING END MILL SPMG 0502.. / 0602..		POWER SERIES	<i>D</i>	<i>d</i>	<i>L</i>	<i>l</i>	<i>W</i>	<i>M</i>	<i>Z</i>		
SM77546	SF11 SP06 D3x11 W12 L100 Z01-H	✓	11	3	100	23	12	M6	1	SPMG 060204	
SM77553	SF14 SP06 D4.5x14 W16 L100 Z01-H	✓	14	4.5	100	28	16	M8	1		
SM77560	SF18 SP06 D7.7x18 W20 L100 Z02-H	✓	18	7.7	100	38	20	M10	2		
SM77577	SF22 SP06 D9x20 W20 L100 Z03-H	✓	20	9	100	40	20	M12	3		
SM77584	SF23 SP06 D12.4x23 W25 L100 Z03-H	✓	23	12.4	100	42	25	M14	3	SPMG 090408	
SM77591	SF26 SP09 D9.8x26 W25 L150 Z03-H	✓	26	9.8	150	45	25	M16	3		
SM77607	SF29 SP09 D12.6x29 W32 L150 Z03-H	✓	29	12.6	150	58	32	M18	3		
SM77614	SF32 SP09 D15.5x32 W32 L150 Z03-H	✓	32	15.5	150	64	32	M20	3		
SM77621	SF35 SP09 D18.4x35 W32 L150 Z03-H	✓	35	18.4	150	70	32	M22	3		
SM77638	SF39 SP09 D22.5x39 W32 L150 Z04-H	✓	39	22.5	150	78	32	M24	4		
SM77645	SF43 SP09 D26.2x43 W32 L150 Z04-H	✓	43	26.2	150	86	32	M27	4		
SM77652	SF48 SP09 D31.3x48 W32 L150 Z04-H	✓	48	31.3	150	90	32	M30	4		



Nominal Screw Size	M6	M8	M10	M12	M14	M16	M18	M20	M22	M24	M27	M30
ØD (mm)	11.0	14.0	17.5	20.0	23.0	26.0	29.0	32.0	35.0	39.0	43.0	48.0
H (mm)	6.5	8.6	10.8	13.0	15.2	17.5	19.5	21.5	23.5	25.5	29.0	32.0
Ød (mm)	6.8	9.0	11.0	14.0	16.0	18.0	20.0	22.0	24.0	26.0	30.0	33.0

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value  N·m
D3x11 - D12.4x29	SPMG 060204	SSV M2.2x5- 9503	STK-T06- 9906	0,4
D9.8x26 - D31.3x48	SPMG 090408	SSV M3.5x10- 9511	STK-T15- 9910	2,7



Ordering Code	Item Designation	Dimensions (mm)								Master Insert*
	<i>BKRF 55 / 60</i> <i>DCM. 11T304.</i> <i>DOVE MILLS</i>	<i>D</i>	<i>Z</i>	<i>Z1*</i>	<i>d</i>	<i>L</i>	<i>K°</i>	<i>K1°</i>	<i>ap</i>	
SM76969	BKRF60 DC07 D25 W16 L120 Z02	25	2	2	16	120	60	30	6.5	DCM. 11T304
SM15845	BKRF60 DC11 D32 W20 L120 Z02	32	2	2	20	120	60	30	10	DCM. 11T304
SM15852	BKRF60 DC11 D40 W25 L120 Z02	40	2	2	25	120	60	30	10	
SM15869	BKRF60 DC11 D50 W25 L120 Z04	50	4	4	25	120	60	30	18	
SM15838	BKRF55 DC11 D60 W25 L120 Z04	60	4	6	25	120	55	35	24	
SM15876	BKRF60 DC11 D80 W32 L120 Z04	80	4	8	32	120	60	30	34	

*Z1= Effective Cutting Teeth / Z1=Etkili kesici ağız

Size Designation	Master Insert*	Spare Parts		
		Screw 	Torx Key 	Screw Torque Value  N·m
D25	DCM. 0702..	SSV M2.5x6-9505	STK-T08-9908	1,0
D32 - D80	DCM. 11T304	SSV M3.5x10-9511	STK-T15-9910	2,7