

KSEM PLUS™ Modular Drill System

Our KSEM PLUS drill concept is simple but effective. It combines the benefits of the KSEM™ modular drill (high feeds and length-to-diameter [L/D] ratios) with the benefits of an indexable drill (high speeds and low consumable costs). The KSEM PLUS system is a modular drilling platform, offering a pre-mountable HSS head with pocket seats for carbide inserts. The KSEM PLUS modular drill system features two head styles that are interchangeable on fitting tool bodies with our flexible FDS interface.

Primary Application

The KSEM PLUS system performs in steel, cast iron, stainless steel, and advanced materials. It is perfectly suited to exchange older HSS tools or low performance indexable drills for a very high performance drilling solution. The KSEM PLUS range comprises 28–101 mm (1.102–4") from 1.5–10 x D. There is a wide range of applications in the energy market, and in general engineering (e.g., bearing rings for windmills, hydraulic manifolds, large engine parts, generator housings, etc.). This tool will deliver vast improvements in productivity, and greatly attribute to increasing your machining capacity.

Features and Benefits

Replaceable Heads with FDS-Interface Coupling

- Quickly and easily replace inserts or drill heads without removing tool bodies from the machine.
- Save money and reduce tool stock by replacing just the worn drill head.
- Use one tool body for different sizes and styles of drill head (a head fits any drill body of the same FDS size).

KSEM PLUS A1 Heads

- High metal removal rates.
- Very stable in normal cutting conditions.
- Cost-effective indexable Drill Fix™ DFT inserts.

KSEM PLUS B1 Heads

- High-speed drilling in difficult conditions.
- Drills stacked plates and cored holes.
- Capable of machining through cross holes.
- Works with slanted exits up to 15°.

Two Effective Cutting Edges

- The KSEM PLUS system has two full cutting edges in action when operating.
- Achieve up to 100% increased productivity versus an indexable drill of the same diameter.
- High L/D ratios possible from 1.5 x D up to 10 x D as stocked standards. Longer drills are possible as custom solutions.

KSEM PLUS Pilot Insert

- Very high feed rates, comparable to modular drills.
- Very long tool life of KSEM PLUS centre inserts and modular heads due to better chip flow.
- No precentring necessary for drill depths up to 5 x D.

DFR™/DFT™/DFC™ Outboard Inserts

- Very high cutting speeds for high metal removal rates.
- Improved stability in all cutting conditions.
- Indexable inserts provide good surface finish and hole diameter accuracy.

KSEM PLUS™ A1 Heads

Economic, high-performance drilling.



NEW!

All KSEMP Heads >70mm now available in 1mm and 1/8" pitch as standard product.

KSEM PLUS B1 Heads

High-performance drilling in difficult conditions.



NEW!

DS geometry for long chipping materials.

NEW!

1.5 x D toolholders now available with WD and SSF shanks.



Tailored Grades

Centre Inserts

- KC7315™ grade — TiAlN-based PVD grade for superior performance in steel and stainless steel applications.
- KC7410™ grade — multilayered PVD coating for outstanding wear resistance when drilling cast irons.
- KC7135™ grade — chip-resistant universal grade with a TiCN-TiN PVD coating for challenging applications in steel and stainless steel materials.

Drill Fix™ Lateral Inserts

- KCU25™ grade — high metal removal rates, advanced TiCN-Al-CVD coating, and superior tool life in stable working conditions.
- KCU40™ grade — multilayered TiAlN-PVD coating with high wear resistance and reliability in most materials at medium cutting speeds.
- KC7140™ grade — TiCN-based, PVD-coated alloyed carbide for machining alloyed steel and stainless steel on KSEM PLUS systems.
- KC7225™ grade — TiAlN PVD-coated fine-grain carbide offers extreme process safety for non-ferrous materials, super alloys, and titanium.

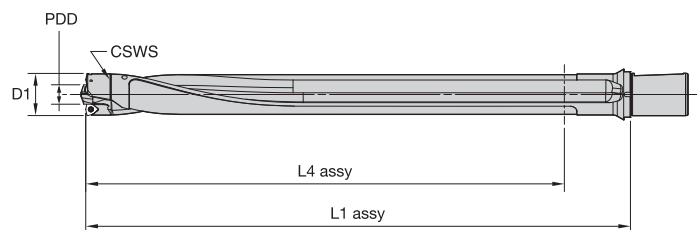
NEW!

DFT™ and DFC™ Lateral Inserts with DS Geometry

- Excellent performance and process stability in applications with long-chipping materials.
- Use for low carbon steel, difficult stainless steel, and non-ferrous materials where long chips can be an issue.
- Available in the KCU40™ grade.

Customisation

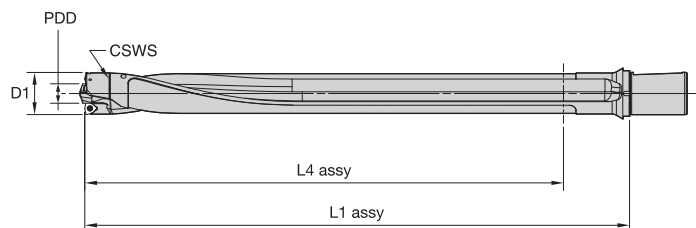
- Heads are available in intermediate diameters, and up to Ø 127mm as semi-standards.
- Tool bodies available in all popular shank styles up to shank length of 1200mm. Some restrictions with L/D ratios over 20 x D apply.
- Toolholders can be designed with helical chip flutes for better chip evacuation (e.g. drilling in cast iron).
- Heads for use with reground center inserts are available as semi-standards.
- The KSEM PLUS system features a high level of available customisation. Please contact us about for your individual metalcutting applications.



available KSEM PLUS heads				requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)				
D1		KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	PDD (mm)	outboard insert		KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in			centre insert size reference	Drill Fix™ DFR/DFT						
28.000	1.1024	4000408	KSEMP2800FDS28A1M	14.000	DFR040304D28	28	6123570	WD32FDS28076M	1.5 x D	57	101
28.575	1.1250	4047811	KSEMP1125FDS28A1	15.000	DFR040304D28		4000409	WD32FDS28128M	3 x D	96	153
29.000	1.1417	4047812	KSEMP2900FDS28A1M	15.000	DFR040304D28		4051136	WD32FDS28190M	5 x D	158	215
29.362	1.1563	4047823	KSEMP1156FDS28A1	16.000	DFR040304D28		4051137	WD32FDS28283M	8 x D	251	308
30.000	1.1811	4047824	KSEMP3000FDS28A1M	16.000	DFR040304D28		4000411	WD32FDS28345M	10 x D	313	370
30.175	1.1875	4047825	KSEMP1188FDS28A1	17.000	DFR040304D28		6123582	SSF150FDS280299	1.5 x D	57	101
30.963	1.2188	4047826	KSEMP1219FDS28A1	17.000	DFR040304D28		4051138	SSF150FDS280502	3 x D	96	153
31.000	1.2205	4047827	KSEMP3100FDS28A1M	17.000	DFR040304D28		4051139	SSF150FDS280746	5 x D	158	215
							4051140	SSF150FDS281112	8 x D	251	308
							4051141	SSF150FDS281356	10 x D	313	370
31.750	1.2500	3794916	KSEMP1250FDS32A1	15.000	DFT05T308D32	32	6123571	WD32FDS32082M	1.5 x D	59	107
32.000	1.2598	3794291	KSEMP3200FDS32A1M	15.000	DFT05T308D32		3950219	WD32FDS32146M	3 x D	110	171
33.000	1.2992	3742210	KSEMP3300FDS32A1M	16.000	DFT05T308D33		3794428	WD32FDS32216M	5 x D	180	241
33.200	1.3071	3793949	KSEMP3320FDS32A1M	16.000	DFT05T308D33		3742293	WD32FDS32321M	8 x D	285	346
33.350	1.3130	3794917	KSEMP1313FDS32A1	17.000	DFT05T308D33		3794429	WD32FDS32391M	10 x D	355	416
34.000	1.3386	3794292	KSEMP3400FDS32A1M	17.000	DFT05T308D33		6123583	SSF150FDS320323	1.5 x D	59	107
34.925	1.3750	3794918	KSEMP1375FDS32A1	18.000	DFT05T308D33		3952192	SSF150FDS320573	3 x D	110	171
35.000	1.3780	3794393	KSEMP3500FDS32A1M	18.000	DFT05T308D33		3794835	SSF150FDS320850	5 x D	180	241
							3794836	SSF150FDS321263	8 x D	285	346
							3794837	SSF150FDS321539	10 x D	355	416
36.000	1.4173	3794394	KSEMP3600FDS36A1M	13.000	DFT06T308D36	36	6123572	WD32FDS36092M	1.5 x D	65	117
36.525	1.4380	3794919	KSEMP1438FDS36A1	14.000	DFT06T308D36		3950220	WD32FDS36166M	3 x D	122	191
37.000	1.4567	3794395	KSEMP3700FDS36A1M	14.000	DFT06T308D36		3794430	WD32FDS36244M	5 x D	200	269
37.500	1.4764	3794427	KSEMP3750FDS36A1M	15.000	DFT06T308D36		3794431	WD32FDS36361M	8 x D	317	386
38.000	1.4961	3794396	KSEMP3800FDS36A1M	15.000	DFT06T308D36		3794432	WD32FDS36439M	10 x D	395	464
38.100	1.5000	3794920	KSEMP1500FDS36A1	15.000	DFT06T308D36		6123584	SSF150FDS360362	1.5 x D	65	117
39.000	1.5354	3794397	KSEMP3900FDS36A1M	16.000	DFT06T308D39		3952343	SSF150FDS360652	3 x D	122	191
39.200	1.5433	3793950	KSEMP3920FDS36A1M	16.000	DFT06T308D39		3794838	SSF150FDS360960	5 x D	200	269
39.700	1.5630	3794921	KSEMP1563FDS36A1	17.000	DFT06T308D39		3794839	SSF150FDS361421	8 x D	317	386
							3794840	SSF150FDS361728	10 x D	395	464
40.000	1.5748	3794398	KSEMP4000FDS40A1M	17.000	DFT06T308D39	40	6123573	WD50FDS40100M	1.5 x D	73	125
41.000	1.6142	3794399	KSEMP4100FDS40A1M	18.000	DFT06T308D39		3872075	WD50FDS40183M	3 x D	137	213
41.275	1.6250	3794922	KSEMP1625FDS40A1	18.000	DFT06T308D39		3794443	WD50FDS40271M	5 x D	225	301
42.000	1.6535	3794400	KSEMP4200FDS40A1M	19.000	DFT06T308D39		3794444	WD50FDS40403M	8 x D	357	433
43.000	1.6929	3794401	KSEMP4300FDS40A1M	20.000	DFT06T308D39		3794445	WD50FDS40491M	10 x D	445	521
44.000	1.7323	3794402	KSEMP4400FDS40A1M	21.000	DFT06T308D44		6123585	SSF200FDS400394	1.5 x D	73	125
44.450	1.7500	3794933	KSEMP1750FDS40A1	22.000	DFT06T308D44		3952344	SSF200FDS400721	3 x D	137	213
							3794841	SSF200FDS401066	5 x D	225	301
							3794842	SSF200FDS401586	8 x D	357	433
							3794903	SSF200FDS401933	10 x D	445	521

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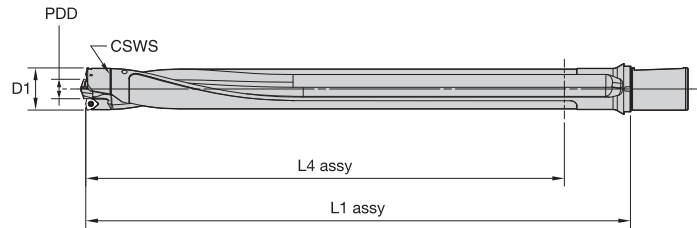
(KSEM PLUS Overview and Assembly for Systems Using A1 Heads — continued)



available KSEM PLUS heads				requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)				
D1				PDD (mm)	outboard insert		KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in	KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	centre insert size reference	Drill Fix™ DFC DPA guiding pads						
45.000	1.7717	3794403	KSEMP4500FDS45A1M	18.000	DFT070408D45	45	6123575	WD50FDS45112M	1.5 x D	85	147
46.000	1.8110	3794404	KSEMP4600FDS45A1M	19.000	DFT070408D45		3872709	WD50FDS45206M	3 x D	152	236
47.000	1.8504	3794405	KSEMP4700FDS45A1M	20.000	DFT070408D45		3794446	WD50FDS45304M	5 x D	250	334
47.625	1.8750	3794934	KSEMP1875FDS45A1	21.000	DFT070408D45		3794447	WD50FDS45451M	8 x D	397	481
48.000	1.8898	3794406	KSEMP4800FDS45A1M	21.000	DFT070408D45		3794448	WD50FDS45549M	10 x D	495	579
49.000	1.9291	3794407	KSEMP4900FDS45A1M	22.000	DFT070408D45		6123586	SSF200FDS450441	1.5 x D	85	147
							3952345	SSF200FDS450809	3 x D	152	236
							3794904	SSF200FDS451196	5 x D	250	334
							3794905	SSF200FDS451775	8 x D	397	481
							3794906	SSF200FDS452161	10 x D	495	579
50.000	1.9685	3742211	KSEMP5000FDS50A1M	23.000	DFT070408D50	50	6123576	WD50FDS50122M	1.5 x D	89	157
50.800	2.0000	3794935	KSEMP2000FDS50A1	24.000	DFT070408D50		3950221	WD50FDS50228M	3 x D	170	263
51.000	2.0079	3794408	KSEMP5100FDS50A1M	24.000	DFT070408D50		3794449	WD50FDS50338M	5 x D	280	373
52.000	2.0472	3794409	KSEMP5200FDS50A1M	25.000	DFT070408D50		3742294	WD50FDS50503M	8 x D	445	538
53.000	2.0866	3794410	KSEMP5300FDS50A1M	26.000	DFT070408D50		3794450	WD50FDS50613M	10 x D	555	648
53.975	2.1250	3794936	KSEMP2125FDS50A1	27.000	DFT070408D50		6123587	SSF200FDS500480	1.5 x D	89	157
54.000	2.1260	3794411	KSEMP5400FDS50A1M	27.000	DFT070408D50		3952346	SSF200FDS500896	3 x D	170	263
55.000	2.1654	3794412	KSEMP5500FDS50A1M	28.000	DFT070408D50		3794907	SSF200FDS501330	5 x D	280	373
							3794908	SSF200FDS501980	8 x D	445	538
							3794909	SSF200FDS502413	10 x D	555	648
56.000	2.2047	3794413	KSEMP5600FDS56A1M	20.000	DFT090508D56	56	6123577	WD50FDS56140M	1.5 x D	130	175
57.000	2.2441	3794414	KSEMP5700FDS56A1M	21.000	DFT090508D56		3950222	WD50FDS56259M	3 x D	191	294
57.150	2.2500	3794937	KSEMP2250FDS56A1	21.000	DFT090508D56		3794451	WD50FDS56383M	5 x D	315	418
58.000	2.2835	3794415	KSEMP5800FDS56A1M	22.000	DFT090508D56		3794452	WD50FDS56569M	8 x D	501	604
59.000	2.3228	3794416	KSEMP5900FDS56A1M	23.000	DFT090508D56		3794453	WD50FDS56693M	10 x D	625	728
60.000	2.3622	3794417	KSEMP6000FDS56A1M	24.000	DFT090508D56		6123588	SSF200FDS560551	1.5 x D	130	175
60.330	2.3750	3794938	KSEMP2375FDS56A1	24.000	DFT090508D56		3952347	SSF200FDS561020	3 x D	191	294
61.000	2.4016	3794418	KSEMP6100FDS56A1M	25.000	DFT090508D56		3794910	SSF200FDS561507	5 x D	315	418
62.000	2.4409	3794419	KSEMP6200FDS56A1M	26.000	DFT090508D56		3794911	SSF200FDS562240	8 x D	501	604
							3794912	SSF200FDS562783	10 x D	625	728
63.000	2.4803	3794420	KSEMP6300FDS63A1M	27.000	DFT090508D63	63	6123578	WD50FDS63154M	1.5 x D	111	194
63.500	2.5000	3794939	KSEMP2500FDS63A1	28.000	DFT090508D63		3950333	WD50FDS63289M	3 x D	214	329
64.000	2.5197	3794421	KSEMP6400FDS63A1M	28.000	DFT090508D63		3794454	WD50FDS63429M	5 x D	354	469
65.000	2.5591	3794422	KSEMP6500FDS63A1M	29.000	DFT090508D63		3794455	WD50FDS63639M	8 x D	564	679
66.000	2.5984	3794423	KSEMP6600FDS63A1M	30.000	DFT090508D63		3742296	WD50FDS63779M	10 x D	704	819
66.680	2.6250	3794940	KSEMP2625FDS63A1	31.000	DFT090508D63		6123589	SSF200FDS630606	1.5 x D	111	194
67.000	2.6378	3794424	KSEMP6700FDS63A1M	31.000	DFT090508D63		3952348	SSF200FDS631138	3 x D	214	329
68.000	2.6772	3794425	KSEMP6800FDS63A1M	32.000	DFT090508D63		3794913	SSF200FDS631688	5 x D	354	469
69.000	2.7165	3794426	KSEMP6900FDS63A1M	33.000	DFT090508D63		3794914	SSF200FDS632515	8 x D	564	679
69.850	2.7500	3794941	KSEMP2750FDS63A1	34.000	DFT090508D63		3794915	SSF200FDS633066	10 x D	704	819
70.000	2.7559	3742212	KSEMP7000FDS63A1M	34.000	DFT090508D63						

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(KSEM PLUS Overview and Assembly for Systems Using A1 Heads — continued)



available KSEM PLUS heads				requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)					
D1		KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	PDD (mm)	outboard insert		KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)	
mm	in			centre insert size reference	Drill Fix™ DFC DPA guiding pads							
71.000	2.7950	6041904	KSEMP7100FDS71A1M	26.000	4x DFT06T308D44	71	6123579	WD50FDS71172M	1.5 x D	128	217	
72.000	2.8350	5397513	KSEMP7200FDS71A1M	27.000			5397942	WD50FDS71292M	3 x D	241	333	
73.000	2.8740	6041906	KSEMP7300FDS71A1M	28.000			5397943	WD50FDS71452M	5 x D	401	493	
73.025	2.8750	6041931	KSEMP2875FDS71A1	28.000			6123590	SSF200FDS710677	1.5 x D	128	217	
74.000	2.9130	5397514	KSEMP7400FDS71A1M	29.000			5397948	SSF200FDS711150	3 x D	241	333	
75.000	2.9530	6041907	KSEMP7500FDS71A1M	30.000			5397949	SSF200FDS711780	5 x D	401	493	
76.000	2.9920	5397515	KSEMP7600FDS71A1M	31.000								
76.200	3.0000	5397516	KSEMP3000FDS71A1	31.000								
77.000	3.0310	6041908	KSEMP7700FDS71A1M	32.000								
78.000	3.0710	5397517	KSEMP7800FDS71A1M	33.000								
79.000	3.1100	6041909	KSEMP7900FDS71A1M	34.000								
79.375	3.1250	6041932	KSEMP3125FDS80A1	31.000	2x DFT06T308D44 & 2x DFT070408D50	80	6123580	WD50FDS80192M	1.5 x D	145	247	
80.000	3.1500	5397518	KSEMP8000FDS80A1M	31.000			5397944	WD50FDS80327M	3 x D	271	373	
81.000	3.1890	6041910	KSEMP8100FDS80A1M	32.000			5397945	WD50FDS80507M	5 x D	451	553	
82.000	3.2280	5397519	KSEMP8200FDS80A1M	33.000			6123591	SSF200FDS800756	1.5 x D	145	247	
83.000	3.2680	6041921	KSEMP8300FDS80A1M	34.000			5398010	SSF200FDS801287	3 x D	271	373	
82.550	3.2500	5397550	KSEMP3250FDS80A1	34.000			5398011	SSF200FDS801996	5 x D	451	553	
84.000	3.3070	5397551	KSEMP8400FDS80A1M	35.000								
85.000	3.3070	6041922	KSEMP8500FDS80A1M	36.000								
85.725	3.3750	6041933	KSEMP3375FDS80A1	37.000								
86.000	3.3860	5397552	KSEMP8600FDS80A1M	37.000								
87.000	3.4250	6041923	KSEMP8700FDS80A1M	38.000								
88.000	3.4650	5397553	KSEMP8800FDS80A1M	39.000								
88.900	3.5000	5397554	KSEMP3500FDS80A1	40.000								
89.000	3.5040	6041924	KSEMP8900FDS80A1M	40.000								
90.000	3.5430	5397555	KSEMP9000FDS90A1M	37.000	4x DFT070408D50		6123581	WD50FDS90212M	1.5 x D	160	272	
91.000	3.5830	6041925	KSEMP9100FDS90A1M	38.000			5397946	WD50FDS90362M	3 x D	302	414	
92.000	3.6220	5397556	KSEMP9200FDS90A1M	39.000			5397947	WD50FDS90562M	5 x D	502	614	
92.075	3.6250	6041934	KSEMP3625FDS90A1	39.000			6123592	SSF200FDS900835	1.5 x D	160	272	
93.000	3.6610	6041926	KSEMP9300FDS90A1M	40.000			5398012	SSF200FDS901425	3 x D	302	414	
							5398013	SSF200FDS902213	5 x D	502	614	
94.000	3.7010	5397557	KSEMP9400FDS90A1M	26.000	6x DFT06T308D44	90						
95.000	3.7400	6041927	KSEMP9500FDS90A1M	27.000								
95.250	3.7500	5397558	KSEMP3750FDS90A1	27.000								
96.000	3.7800	5397559	KSEMP9600FDS90A1M	28.000								
97.000	3.8190	6041928	KSEMP9700FDS90A1M	29.000								
98.000	3.8580	5397560	KSEMP9800FDS90A1M	30.000								
98.425	3.8750	6041935	KSEMP3875FDS90A1	31.000								
99.000	3.8980	6041929	KSEMP9900FDS90A1M	31.000								
100.000	3.9370	6041930	KSEMP10000FDS90A1M	32.000								
101.600	4.0000	5397561	KSEMP4000FDS90A1	34.000								

Keep it Short and Simple...

Achieve short chips in long-chipping materials with our new DS/LP geometries for indexable drills and KSEM PLUS™.

- High metal removal rates without long chips, especially in low-carbon steel applications.
- Improved control of chip flow, chip breakage, and chip curling. Eliminates chip jamming by providing excellent chip forming and chipbreaking capabilities.
- Avoid bird nesting and long, stringy chips to reduce idle time and improve process stability.

See pages J4–J50 for Drill Fix™ Indexable Drills.

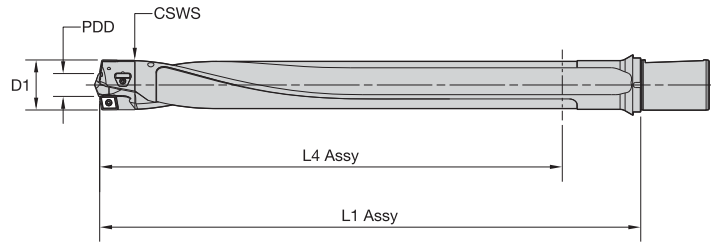
See pages H80–H82, H84–H101, and H106 for KSEM PLUS A1 and B1 head systems.



Experience the advantages at your Authorised Kennametal Distributor or at kennametal.com.



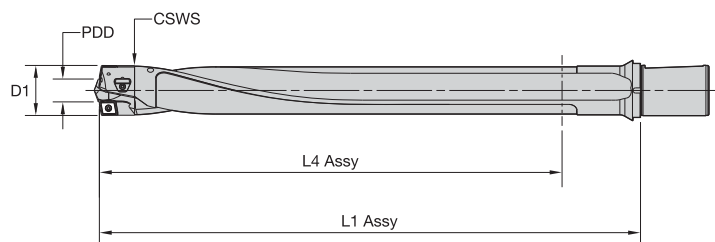
kennametal.com



available KSEM PLUS heads				requested insert size reference per head		available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)					
D1		KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	PDD (mm)	outboard insert	CSWS	KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in			centre insert size reference	Drill Fix™ DFC DPA guiding pads						
28.000	1.1020	5115736	KSEMP2800FDS28B1M	14.000	DFC inserts DFC040310D28 DPA guiding pads DPA07T3D25	28	6123570	WD32FDS28076M	1.5 x D	54	98
28.575	1.1250	5115737	KSEMP1125FDS28B1	15.000			4000409	WD32FDS28128M	3 x D	93	150
29.000	1.1420	5115738	KSEMP2900FDS28B1M	15.000			4051136	WD32FDS28190M	5 x D	155	212
29.362	1.1560	5115739	KSEMP1156FDS28B1	16.000			4051137	WD32FDS28283M	8 x D	248	305
30.000	1.1810	5116010	KSEMP3000FDS28B1M	16.000			4000411	WD32FDS28345M	10 x D	310	367
30.175	1.1880	5116011	KSEMP1188FDS28B1	17.000			6123582	SSF150FDS280299	1.5 x D	54	98
30.963	1.2190	5116012	KSEMP1219FDS28B1	17.000			4051138	SSF150FDS280502	3 x D	93	150
31.000	1.2200	5116013	KSEMP3100FDS28B1M	17.000			4051139	SSF150FDS280746	5 x D	155	212
							4051140	SSF150FDS281112	8 x D	248	305
							4051141	SSF150FDS281356	10 x D	310	367
31.750	1.2500	5116014	KSEMP1250FDS32B1	15.000	DFC inserts DFC05T312D32 DPA guiding pads DPA09T4D32	32	6123571	WD32FDS32082M	1.5 x D	54	102
32.000	1.2600	5116015	KSEMP3200FDS32B1M	15.000			3950219	WD32FDS32146M	3 x D	105	166
33.000	1.2990	5116016	KSEMP3300FDS32B1M	16.000			3794428	WD32FDS32216M	5 x D	175	236
33.200	1.3070	5116017	KSEMP3320FDS32B1M	16.000			3742293	WD32FDS32321M	8 x D	280	341
33.350	1.3130	5116018	KSEMP1313FDS32B1	17.000			3794429	WD32FDS32391M	10 x D	350	411
34.000	1.3390	5116019	KSEMP3400FDS32B1M	17.000			6123583	SSF150FDS320323	1.5 x D	54	102
34.925	1.3750	5116030	KSEMP1375FDS32B1	18.000			3952192	SSF150FDS320573	3 x D	105	166
35.000	1.3780	5116031	KSEMP3500FDS32B1M	18.000			3794835	SSF150FDS320850	5 x D	175	236
							3794836	SSF150FDS321263	8 x D	280	341
							3794837	SSF150FDS321539	10 x D	350	411
36.000	1.4170	5116032	KSEMP3600FDS36B1M	13.000	DFC inserts DFC06T312D36 DPA guiding pads DPA09T4D32	36	6123572	WD32FDS36092M	1.5 x D	60	112
36.525	1.4380	5116033	KSEMP1438FDS36B1	14.000			3950220	WD32FDS36166M	3 x D	117	186
37.000	1.4570	5116034	KSEMP3700FDS36B1M	14.000			3794430	WD32FDS36244M	5 x D	195	264
37.500	1.4760	5116035	KSEMP3750FDS36B1M	15.000			3794431	WD32FDS36361M	8 x D	312	381
38.000	1.4960	5116036	KSEMP3800FDS36B1M	15.000			3794432	WD32FDS36439M	10 x D	390	459
38.100	1.5000	5116037	KSEMP1500FDS36B1	15.000			6123584	SSF150FDS360362	1.5 x D	60	112
39.000	1.5350	5116038	KSEMP3900FDS36B1M	16.000			3952343	SSF150FDS360652	3 x D	117	186
39.200	1.5430	5116039	KSEMP3920FDS36B1M	16.000			3794838	SSF150FDS360960	5 x D	195	264
39.700	1.5630	5116040	KSEMP1563FDS36B1	17.000			3794839	SSF150FDS361421	8 x D	312	381
							3794840	SSF150FDS361728	10 x D	390	459
40.000	1.5750	5116041	KSEMP4000FDS40B1M	17.000	DFC inserts DFC06T312D36 DPA guiding pads DPA09T4D32	40	6123573	WD50FDS40100M	1.5 x D	68	120
41.000	1.6140	5116042	KSEMP4100FDS40B1M	18.000			3872075	WD50FDS40183M	3 x D	132	208
41.275	1.6250	5116043	KSEMP1625FDS40B1	18.000			3794443	WD50FDS40271M	5 x D	220	296
42.000	1.6540	5116044	KSEMP4200FDS40B1M	19.000			3794444	WD50FDS40403M	8 x D	352	428
43.000	1.6930	5116045	KSEMP4300FDS40B1M	20.000			3794445	WD50FDS40491M	10 x D	440	516
44.000	1.7320	5116046	KSEMP4400FDS40B1M	21.000			6123585	SSF200FDS400394	1.5 x D	68	120
44.450	1.7500	5116047	KSEMP1750FDS40B1	22.000			3952344	SSF200FDS400721	3 x D	132	208
							3794841	SSF200FDS401066	5 x D	220	296
							3794842	SSF200FDS401586	8 x D	352	428
							3794903	SSF200FDS401933	10 x D	440	516

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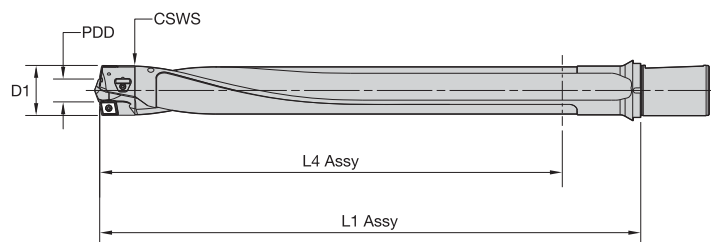
(KSEM PLUS Overview and Assembly for Systems Using B1 Heads — continued)



available KSEM PLUS heads				requested insert size reference per head		available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)					
D1		KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	PDD (mm)	outboard insert	CSWS	KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in			centre insert size reference	Drill Fix™ DFC DPA guiding pads						
45.000	1.7720	5116098	KSEMP4500FDS45B1M	18.000	DFC inserts DFC070416D45 DPA guiding pads DPA09T4D32	45	6123575	WD50FDS45112M	1.5 x D	80	142
46.000	1.8110	5116099	KSEMP4600FDS45B1M	19.000			3872709	WD50FDS45206M	3 x D	147	231
47.000	1.8500	5116110	KSEMP4700FDS45B1M	20.000			3794446	WD50FDS45304M	5 x D	245	329
47.625	1.8750	5116111	KSEMP1875FDS45B1	21.000			3794447	WD50FDS45451M	8 x D	392	476
48.000	1.8900	5116112	KSEMP4800FDS45B1M	21.000			3794448	WD50FDS45549M	10 x D	490	574
49.000	1.9290	5116113	KSEMP4900FDS45B1M	22.000			6123586	SSF200FDS450441	1.5 x D	80	142
							3952345	SSF200FDS450809	3 x D	147	231
							3794904	SSF200FDS451196	5 x D	245	329
							3794905	SSF200FDS451775	8 x D	392	476
							3794906	SSF200FDS452161	10 x D	490	574
50.000	1.9690	5116114	KSEMP5000FDS50B1M	23.000	DFC inserts DFC070416D45 DPA guiding pads DPA13T5D50	50	6123576	WD50FDS50122M	1.5 x D	84	152
50.800	2.0000	5116115	KSEMP2000FDS50B1	24.000			3950221	WD50FDS50228M	3 x D	165	258
51.000	2.0080	5116116	KSEMP5100FDS50B1M	24.000			3794449	WD50FDS50338M	5 x D	275	368
52.000	2.0470	5116117	KSEMP5200FDS50B1M	25.000			3742294	WD50FDS50503M	8 x D	440	533
53.000	2.0870	5116118	KSEMP5300FDS50B1M	26.000			3794450	WD50FDS50613M	10 x D	550	643
53.975	2.1250	5116119	KSEMP2125FDS50B1	27.000			6123587	SSF200FDS500480	1.5 x D	84	152
54.000	2.1260	5116120	KSEMP5400FDS50B1M	27.000			3952346	SSF200FDS500896	3 x D	165	258
55.000	2.1650	5116121	KSEMP5500FDS50B1M	28.000			3794907	SSF200FDS501330	5 x D	275	368
							3794908	SSF200FDS501980	8 x D	440	533
							3794909	SSF200FDS502413	10 x D	550	643
56.000	2.2050	5116122	KSEMP5600FDS56B1M	20.000	DFC inserts DFC090520D56 DPA guiding pads DPA13T5D50	56	6123577	WD50FDS56140M	1.5 x D	125	170
57.000	2.2440	5116123	KSEMP5700FDS56B1M	21.000			3950222	WD50FDS56259M	3 x D	186	289
57.150	2.2500	5116124	KSEMP2250FDS56B1	21.000			3794451	WD50FDS56383M	5 x D	310	413
58.000	2.2830	5116125	KSEMP5800FDS56B1M	22.000			3794452	WD50FDS56569M	8 x D	496	599
59.000	2.3230	5116126	KSEMP5900FDS56B1M	23.000			3794453	WD50FDS56693M	10 x D	620	723
60.000	2.3620	5116127	KSEMP6000FDS56B1M	24.000			6123588	SSF200FDS560551	1.5 x D	125	170
60.330	2.3750	5116128	KSEMP2375FDS56B1	24.000			3952347	SSF200FDS561020	3 x D	186	289
61.000	2.4020	5116129	KSEMP6100FDS56B1M	25.000			3794910	SSF200FDS561507	5 x D	310	413
62.000	2.4410	5116130	KSEMP6200FDS56B1M	26.000			3794911	SSF200FDS562240	8 x D	496	599
							3794912	SSF200FDS562783	10 x D	620	723
63.000	2.4800	5116131	KSEMP6300FDS63B1M	27.000	DFC inserts DFC090520D56 DPA guiding pads DPA13T5D50	63	6123578	WD50FDS63154M	1.5 x D	107	190
63.500	2.5000	5116132	KSEMP2500FDS63B1	28.000			3950333	WD50FDS63289M	3 x D	210	325
64.000	2.5200	5116133	KSEMP6400FDS63B1M	28.000			3794454	WD50FDS63429M	5 x D	350	465
65.000	2.5590	5116134	KSEMP6500FDS63B1M	29.000			3794455	WD50FDS63639M	8 x D	560	675
66.000	2.5980	5116135	KSEMP6600FDS63B1M	30.000			3742296	WD50FDS63779M	10 x D	700	815
66.680	2.6250	5116136	KSEMP2625FDS63B1	31.000			6123589	SSF200FDS630606	1.5 x D	107	190
67.000	2.6380	5116137	KSEMP6700FDS63B1M	31.000			3952348	SSF200FDS631138	3 x D	210	325
68.000	2.6770	5116138	KSEMP6800FDS63B1M	32.000			3794913	SSF200FDS631688	5 x D	350	465
69.000	2.7170	5116139	KSEMP6900FDS63B1M	33.000			3794914	SSF200FDS632515	8 x D	560	675
69.850	2.7500	5116140	KSEMP2750FDS63B1	34.000			3794915	SSF200FDS633066	10 x D	700	815
70.000	2.7560	5116141	KSEMP7000FDS63B1M	34.000							

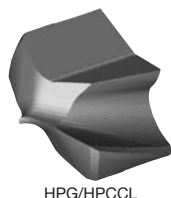
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(KSEM PLUS Overview and Assembly for Systems Using B1 Heads — continued)

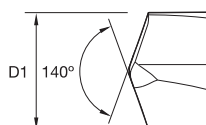


available KSEM PLUS heads				requested insert size reference per head		available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)					
D1		KSEM PLUS head order number	KSEM PLUS head ANSI catalogue number	PDD (mm)	outboard insert	CSWS	KSEM PLUS body order number	KSEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in			centre insert size reference	Drill Fix™ DFC DPA guiding pads						
71.000	2.7950	6041937	KSEMP7100FDS71B1M	26.000	DFC inserts 4x DFC06T312D36 DPA guiding pads DPA13T5D50	71	6123579	WD50FDS71172M	1.5 x D	127	216
72.000	2.8350	6041797	KSEMP7200FDS71B1M	27.000			5397942	WD50FDS71292M	3 x D	240	332
73.000	2.8740	6041938	KSEMP7300FDS71B1M	28.000			5397943	WD50FDS71452M	5 x D	400	492
73.025	2.8750	6042002	KSEMP2875FDS71B1	28.000			6123590	SSF200FDS710677	1.5 x D	127	216
74.000	2.9130	6041798	KSEMP7400FDS71B1M	29.000			5397948	SSF200FDS711150	3 x D	240	332
75.000	2.9530	6041939	KSEMP7500FDS71B1M	30.000			5397949	SSF200FDS711780	5 x D	400	492
76.000	2.9920	6041799	KSEMP7600FDS71B1M	31.000							
77.000	3.0310	6041940	KSEMP7700FDS71B1M	32.000							
76.200	3.0000	5397562	KSEMP3000FDS71B1	31.000							
78.000	3.0710	6041800	KSEMP7800FDS71B1M	33.000							
79.000	3.1100	6041991	KSEMP7900FDS71B1M	34.000							
79.375	3.1250	6042003	KSEMP3125FDS80B1	31.000	DFC inserts 2x DFC06T312D36 & 2x DFC070416D45 DPA guiding pads DPA13T5D50	80	6123580	WD50FDS80192M	1.5 x D	144	246
80.000	3.1500	6041881	KSEMP8000FDS80B1M	31.000			5397944	WD50FDS80327M	3 x D	270	372
81.000	3.1890	6041992	KSEMP8100FDS80B1M	32.000			5397945	WD50FDS80507M	5 x D	450	552
82.000	3.2280	6041882	KSEMP8200FDS80B1M	33.000			6123591	SSF200FDS800756	1.5 x D	144	246
82.550	3.2500	5397563	KSEMP3250FDS80B1	34.000			5398010	SSF200FDS801287	3 x D	270	372
83.000	3.2680	6041993	KSEMP8300FDS80B1M	34.000			5398011	SSF200FDS801996	5 x D	450	552
84.000	3.3070	6041883	KSEMP8400FDS80B1M	35.000							
85.000	3.3460	6041994	KSEMP8500FDS80B1M	36.000							
85.725	3.3750	6042004	KSEMP3375FDS80B1	37.000							
86.000	3.3860	6041884	KSEMP8600FDS80B1M	37.000							
87.000	3.4250	6041995	KSEMP8700FDS80B1M	38.000							
88.000	3.4650	6041885	KSEMP8800FDS80B1M	39.000							
88.900	3.5000	5397564	KSEMP3500FDS80B1	40.000							
89.000	3.5040	6041996	KSEMP8900FDS80B1M	40.000							
90.000	3.5430	6041886	KSEMP9000FDS90B1M	37.000	DFC inserts 4x DFC070416D45 DPA guiding pads DPA13T5D50	90	6123581	WD50FDS90212M	1.5 x D	158	270
91.000	3.5830	6041997	KSEMP9100FDS90B1M	38.000			5397946	WD50FDS90362M	3 x D	300	412
92.000	3.6220	6041887	KSEMP9200FDS90B1M	39.000			5397947	WD50FDS90562M	5 x D	500	612
92.075	3.6250	6042005	KSEMP3625FDS90B1	39.000			6123592	SSF200FDS900835	1.5 x D	158	270
93.000	3.6610	6041998	KSEMP9300FDS90B1M	40.000			5398012	SSF200FDS901425	3 x D	300	412
							5398013	SSF200FDS902213	5 x D	500	612
94.000	3.7010	6041888	KSEMP9400FDS90B1M	26.000	DFC inserts 6x DFC06T312D36 DPA guiding pads DPA13T5D50	90					
95.000	3.7400	6041999	KSEMP9500FDS90B1M	27.000							
95.250	3.7500	5397565	KSEMP3750FDS90B1	27.000							
96.000	3.7800	6041889	KSEMP9600FDS90B1M	28.000							
97.000	3.8190	6042000	KSEMP9700FDS90B1M	29.000							
98.000	3.8580	6041890	KSEMP9800FDS90B1M	30.000							
98.425	3.8750	6042006	KSEMP3875FDS90B1	31.000							
99.000	3.8980	6042001	KSEMP9900FDS90B1M	31.000							
100.000	3.9370	6041901	KSEMP10000FDS90B1M	32.000							
101.600	4.0000	5397566	KSEMP4000FDS90B1	34.000							

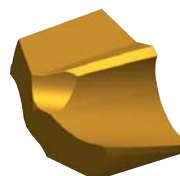
- To ensure 100% system stability, KSEM™ inserts used for KSEM PLUS should not be reground.
- The callout D1 (mm) = PDD. PDD is used in reference to the KSEM PLUS heads.
- Please refer to KSEMP insert recommendation on page H106 to configure your insert setup depending on the application.



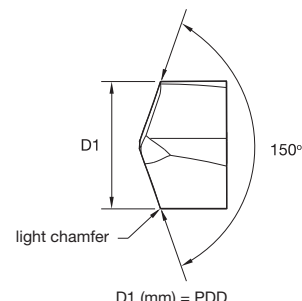
HPG/HPCCL



D1 (mm) = PDD



PC



D1 (mm) = PDD

KSEM PLUS Centre Inserts



- first choice
- alternate choice

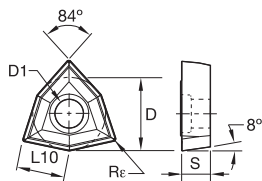
HPG • KC7315	HPCCL • KC7410	PC • KC7135	D1		seat size
			mm	in	
KSEMP1300HPGM	KSEM1300HPCCLM	KSEM1300PCM	13,000	.5118	C
KSEMP1400HPGM	KSEM1400HPCCLM	KSEM1400PCM	14,000	.5512	B
KSEMP1500HPGM	KSEM1500HPCCLM	KSEM1500PCM	15,000	.5906	A
KSEMP1600HPGM	KSEM1600HPCCLM	KSEM1600PCM	16,000	.6299	1
KSEMP1700HPGM	KSEM1700HPCCLM	KSEM1700PCM	17,000	.6693	1
KSEMP1800HPGM	KSEM1800HPCCLM	KSEM1800PCM	18,000	.7087	1
KSEMP1900HPGM	KSEM1900HPCCLM	KSEM1900PCM	19,000	.7480	2
KSEMP2000HPGM	KSEM2000HPCCLM	KSEM2000PCM	20,000	.7874	3
KSEMP2100HPGM	KSEM2100HPCCLM	KSEM2100PCM	21,000	.8268	3
KSEMP2200HPGM	KSEM2200HPCCLM	KSEM2200PCM	22,000	.8661	3
KSEMP2300HPGM	KSEM2300HPCCLM	KSEM2300PCM	23,000	.9055	4
KSEMP2400HPGM	KSEM2400HPCCLM	KSEM2400PCM	24,000	.9449	4
KSEMP2500HPGM	KSEM2500HPCCLM	KSEM2500PCM	25,000	.9843	5
KSEMP2600HPGM	KSEM2600HPCCLM	KSEM2600PCM	26,000	1.0236	5
KSEMP2700HPGM	KSEM2700HPCCLM	KSEM2700PCM	27,000	1.0630	6
KSEMP2800HPGM	KSEM2800HPCCLM	KSEM2800PCM	28,000	1.1024	6
KSEMP2900HPGM	KSEM2900HPCCLM	KSEM2900PCM	29,000	1.1417	7
KSEMP3000HPGM	KSEM3000HPCCLM	KSEM3000PCM	30,000	1.1811	7
KSEMP3100HPGM	KSEM3100HPCCLM	KSEM3100PCM	31,000	1.2205	8
KSEMP3200HPGM	KSEM3200HPCCLM	KSEM3200PCM	32,000	1.2598	8
KSEMP3300HPGM	KSEM3300HPCCLM	KSEM3300PCM	33,000	1.2992	9
KSEMP3400HPGM	KSEM3400HPCCLM	KSEM3400PCM	34,000	1.3386	9
KSEMP3500HPGM	KSEM3500HPCCLM	KSEM3500PCM	35,000	1.3780	9
KSEMP3600HPGM	KSEM3600HPCCLM	KSEM3600PCM	36,000	1.4173	9
KSEMP3700HPGM	KSEM3700HPCCLM	KSEM3700PCM	37,000	1.4567	10
KSEMP3800HPGM	KSEM3800HPCCLM	KSEM3800PCM	38,000	1.4961	10
KSEMP3900HPGM	KSEM3900HPCCLM	KSEM3900PCM	39,000	1.5354	10
KSEMP4000HPGM	KSEM4000HPCCLM	KSEM4000PCM	40,000	1.5748	10

Tolerance KSEMP HPG • KSEM HPCCL
• Metric

D1	tolerance h8
12,5–18	+0,000/-0,027
>18–30	+0,000/-0,033
>30–40	+0,000/-0,039

Tolerance KSEM PC • Metric

D1 metric	tolerance k7
12,5–18	+0,001/+ 0,019
>18–30	+0,002/+ 0,023
>30–40	+0,002/+ 0,027

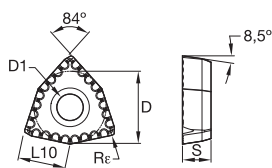
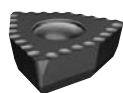


- first choice
- alternate choice

P	●	●
M	○	○
K	●	○
N	○	○
S	○	●
H	○	○

■ DFT-HP

catalogue number	L10	D	D1	S	Re	KCU25	KCU40
DFT05T308D32HP	5,29	8,00	3,40	3,75	0,80	●	●
DFT05T308D33HP	5,29	8,00	3,40	3,75	0,80	●	●
DFT06T308D36HP	6,62	10,00	4,40	3,75	0,80	●	●
DFT06T308D39HP	6,62	10,00	4,40	3,75	0,80	●	●
DFT06T308D44HP	6,62	10,00	4,40	3,75	0,80	●	●
DFT070408D45HP	7,94	12,00	4,40	4,75	0,80	●	●
DFT070408D50HP	7,94	12,00	4,40	4,75	0,80	●	●
DFT090508D56HP	9,92	15,00	5,50	5,25	0,80	●	●
DFT090508D63HP	9,92	15,00	5,50	5,25	0,80	●	●

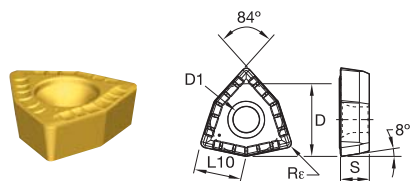


- first choice
- alternate choice

P	●
M	○
K	○
N	○
S	○
H	○

■ DFT • DS

catalogue number	L10	D	D1	S	Re	KCU40
DFT05T308D32DS	5,29	8,00	3,40	3,75	0,80	●
DFT05T308D33DS	5,29	8,00	3,40	3,75	0,80	●
DFT06T308D36DS	6,62	10,00	4,40	3,75	0,80	●
DFT06T308D39DS	6,62	10,00	4,40	3,75	0,80	●
DFT06T308D44DS	6,62	10,00	4,40	3,75	0,80	●
DFT070408D45DS	7,94	12,00	4,40	4,75	0,80	●
DFT070408D50DS	7,94	12,00	4,40	4,75	0,80	●
DFT090508D56DS	9,92	15,00	5,50	5,25	0,80	●
DFT090508D63DS	9,92	15,00	5,50	5,25	0,80	●



- first choice
- alternate choice

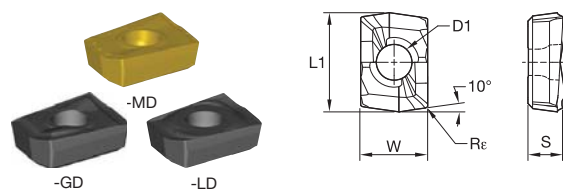
P	●
M	●
K	○
N	○
S	○
H	○

Modular Drills

DFT-MD

catalogue number	L10	D	D1	S	Rε	KC7140
DFT05T308D32MD	5,29	8,00	3,40	3,75	0,80	●
DFT05T308D33MD	5,29	8,00	3,40	3,75	0,80	●
DFT06T308D36MD	6,62	10,00	4,40	3,75	0,80	●
DFT06T308D39MD	6,62	10,00	4,40	3,75	0,80	●
DFT06T308D44MD	6,62	10,00	4,40	3,75	0,80	●
DFT070408D45MD	7,94	12,00	4,40	4,75	0,80	●
DFT070408D50MD	7,94	12,00	4,40	4,75	0,80	●
DFT090508D56MD	9,92	15,00	5,50	5,25	0,80	●
DFT090508D63MD	9,92	15,00	5,50	5,25	0,80	●

KSEM PLUS A1 Heads • Drill Fix DFR™ Inserts

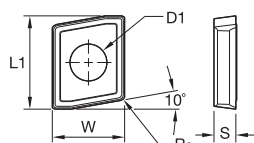


- first choice
- alternate choice

P	●	○	○	○
M	●	○	○	○
K	○	●	○	○
N	○	○	○	○
S	○	○	○	○
H	○	○	○	○

DFR-GD, -MD, -LD

catalogue number	LI	W	D1	S	Rε	KC7140	KC7225	KCU25	KCU40
DFR040304D28GD	10,76	7,26	2,85	3,79	0,40	—	—	●	●
DFR040304D28LD	10,76	7,26	2,85	3,78	0,40	—	●	—	—
DFR040304D28MD	10,76	7,26	2,85	3,79	0,40	●	—	—	—

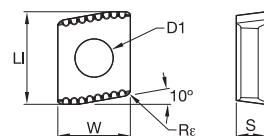


● first choice
○ alternate choice

P	●	●
M	○	○
K	●	○
N	○	●
S	○	●
H	●	●

DFC-HP

catalogue number	LI	W	D1	S	Re	KCU25	KCU40
DFC040310D28HP	10,00	7,60	2,85	3,18	0,50	●	●
DFC05T312D32HP	12,00	9,40	3,40	3,75	0,80	●	●
DFC06T312D36HP	16,00	12,40	4,40	3,75	0,80	●	●
DFC070416D45HP	18,00	14,50	4,40	4,75	0,80	●	●
DFC090520D56HP	24,00	19,00	5,50	5,25	0,80	●	●



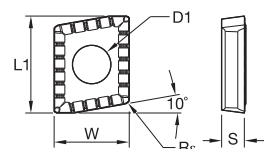
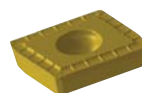
● first choice
○ alternate choice

P	●	●
M	○	○
K	○	○
N	●	●
S	●	●
H	●	●

DFC-DS

catalogue number	LI	W	D1	S	Re	KCU40
DFC040310D28DS	10,00	7,60	2,85	3,18	0,50	●
DFC05T312D32DS	12,00	9,40	3,40	3,75	0,80	●
DFC06T312D36DS	16,00	12,40	4,40	3,75	0,80	●
DFC070416D45DS	18,00	14,50	4,40	4,75	0,80	●
DFC090520D56DS	24,00	19,00	5,50	5,25	0,80	●

NEW!

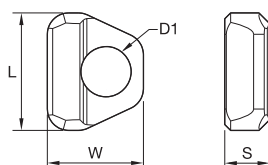
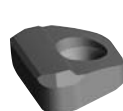


● first choice
○ alternate choice

P	●	●
M	●	●
K	○	○
N	○	○
S	○	○
H	●	●

DFC-MD

catalogue number	LI	W	D1	S	Re	KCU7140
DFC040310D28MD	10,00	7,60	2,85	3,18	0,50	●
DFC05T312D32MD	12,00	9,40	3,40	3,75	0,80	●
DFC06T312D36MD	16,00	12,40	4,40	3,75	0,80	●
DFC070416D45MD	18,00	14,50	4,40	4,75	0,80	●
DFC090520D56MD	24,00	19,00	5,50	5,25	0,80	●



● first choice
○ alternate choice

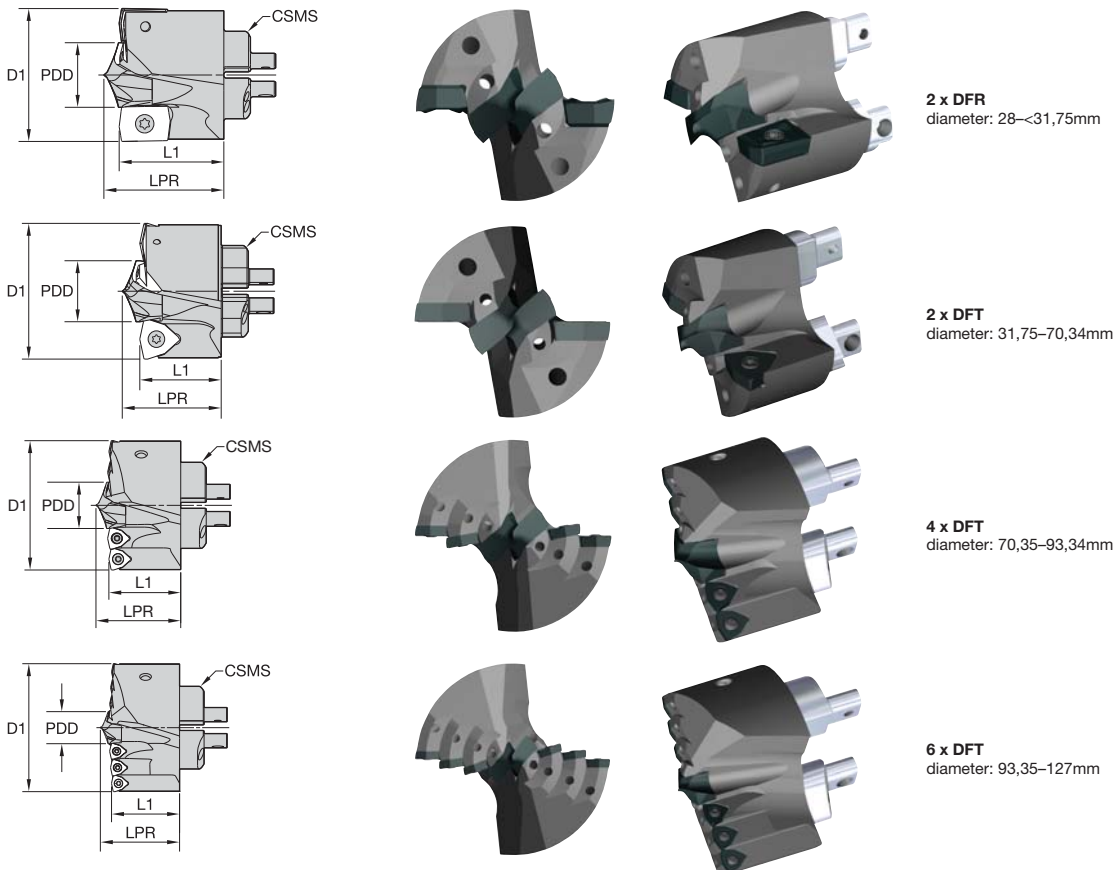
P	●	●
M	●	●
K	●	●
N	●	●
S	●	●
H	●	●

DPA Guiding Pads

catalogue number	L		W		D1		S		KCU40
	mm	in	mm	in	mm	in	mm	in	
DPA07T3D25	8,60	.3390	7,00	.2760	2,85	.1120	3,50	.1380	●
DPA09T4D32	11,00	.4330	9,00	.3540	3,40	.1340	4,20	.1650	●
DPA13T5D50	16,00	.6300	13,00	.5120	4,40	.1730	5,20	.2050	●



- To ensure 100% system stability, KSEM™ inserts used for KSEM PLUS should not be reground.
- KSEM PLUS heads are shipped with all insert screws.
- KSEM PLUS heads are shipped with two wrenches, one for the KSEM insert and one to be used for the DFT™/DFR™ inserts as well as for the assembly of the body to the head.
- Order KSEM PLUS shanks using connection coupling size (CSMS) to determine which heads go with each shank.
- PDD in the callout drawing refers to the D1 of the KSEM HPG and HPCCL inserts for use with KSEM PLUS.
- Order inserts (KSEM, DFT, and DFR) for KSEM PLUS separately.



■ KSEM PLUS A1 Heads 28–101,60mm (1.102–4")

order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
4000408	KSEMP2800FDS28A1M	KSEMP2800FDS28A1M	28,00	1.102	14,00	.5512	24,9	.980	22,0	.866	FDS28
4047811	KSEMP2858FDS28A1M	KSEMP1125FDS28A1	28,58	1.125	15,00	.5906	25,0	.984	22,0	.866	FDS28
4047812	KSEMP2900FDS28A1M	KSEMP2900FDS28A1M	29,00	1.142	15,00	.5906	25,0	.984	22,0	.866	FDS28
4047823	KSEMP2937FDS28A1M	KSEMP1156FDS28A1	29,36	1.156	16,00	.6299	25,2	.992	22,0	.866	FDS28
4047824	KSEMP3000FDS28A1M	KSEMP3000FDS28A1M	30,00	1.181	16,00	.6299	25,2	.992	22,0	.866	FDS28
4047825	KSEMP3017FDS28A1M	KSEMP1188FDS28A1	30,18	1.188	17,00	.6693	25,4	1.000	22,0	.866	FDS28
4047826	KSEMP3096FDS28A1M	KSEMP1219FDS28A1	30,96	1.219	17,00	.6693	25,4	1.000	22,0	.866	FDS28
4047827	KSEMP3100FDS28A1M	KSEMP3100FDS28A1M	31,00	1.221	17,00	.6693	25,4	1.000	22,0	.866	FDS28
3794916	KSEMP3175FDS32A1M	KSEMP1250FDS32A1	31,75	1.250	15,00	.5906	23,0	.907	20,0	.787	FDS32
3794291	KSEMP3200FDS32A1M	KSEMP3200FDS32A1M	32,00	1.260	15,00	.5906	23,0	.907	20,0	.787	FDS32
3742210	KSEMP3300FDS32A1M	KSEMP3300FDS32A1M	33,00	1.299	16,00	.6299	23,2	.913	20,0	.787	FDS32
3793949	KSEMP3320FDS32A1M	KSEMP3320FDS32A1M	33,20	1.307	16,00	.6299	23,2	.913	20,0	.787	FDS32
3794917	KSEMP3334FDS32A1M	KSEMP1313FDS32A1	33,35	1.313	17,00	.6693	23,4	.920	20,0	.787	FDS32
3794292	KSEMP3400FDS32A1M	KSEMP3400FDS32A1M	34,00	1.339	17,00	.6693	23,4	.920	20,0	.787	FDS32
3794918	KSEMP3493FDS32A1M	KSEMP1375FDS32A1	34,93	1.375	18,00	.7087	23,6	.928	20,0	.787	FDS32
3794393	KSEMP3500FDS32A1M	KSEMP3500FDS32A1M	35,00	1.378	18,00	.7087	23,6	.928	20,0	.787	FDS32

(continued)

(KSEM PLUS A1 Heads 28–101,60mm (1.102–4") — continued)

Modular Drills

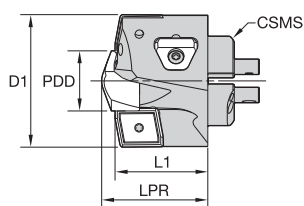
order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
3794394	KSEMP3600FDS36A1M	KSEMP3600FDS36A1M	36,00	1.417	13,00	.5118	22,7	.893	20,0	.787	FDS36
3794919	KSEMP3651FDS36A1M	KSEMP1438FDS36A1	36,53	1.438	14,00	.5512	22,9	.900	20,0	.787	FDS36
3794395	KSEMP3700FDS36A1M	KSEMP3700FDS36A1M	37,00	1.457	14,00	.5512	22,9	.900	20,0	.787	FDS36
3794427	KSEMP3750FDS36A1M	KSEMP3750FDS36A1M	37,50	1.476	15,00	.5906	23,0	.907	20,0	.787	FDS36
3794396	KSEMP3800FDS36A1M	KSEMP3800FDS36A1M	38,00	1.496	15,00	.5906	23,0	.907	20,0	.787	FDS36
3794920	KSEMP3810FDS36A1M	KSEMP1500FDS36A1	38,10	1.500	15,00	.5906	23,0	.907	20,0	.787	FDS36
3794397	KSEMP3900FDS36A1M	KSEMP3900FDS36A1M	39,00	1.535	16,00	.6299	23,2	.913	20,0	.787	FDS36
3793950	KSEMP3920FDS36A1M	KSEMP3920FDS36A1M	39,20	1.543	16,00	.6299	23,2	.913	20,0	.787	FDS36
3794921	KSEMP3970FDS36A1M	KSEMP1563FDS36A1	39,70	1.563	17,00	.6693	23,4	.920	20,0	.787	FDS36
3794398	KSEMP4000FDS40A1M	KSEMP4000FDS40A1M	40,00	1.575	17,00	.6693	28,6	1.125	25,0	.984	FDS40
3794399	KSEMP4100FDS40A1M	KSEMP4100FDS40A1M	41,00	1.614	18,00	.7087	28,8	1.132	25,0	.984	FDS40
3794922	KSEMP4128FDS40A1M	KSEMP1625FDS40A1	41,28	1.625	18,00	.7087	28,8	1.132	25,0	.984	FDS40
3794400	KSEMP4200FDS40A1M	KSEMP4200FDS40A1M	42,00	1.654	19,00	.7480	28,9	1.139	25,0	.984	FDS40
3794401	KSEMP4300FDS40A1M	KSEMP4300FDS40A1M	43,00	1.693	20,00	.7874	29,1	1.146	25,0	.984	FDS40
3794402	KSEMP4400FDS40A1M	KSEMP4400FDS40A1M	44,00	1.732	21,00	.8268	29,3	1.153	25,0	.984	FDS40
3794933	KSEMP4445FDS40A1M	KSEMP1750FDS40A1	44,45	1.750	22,00	.8661	29,5	1.160	25,0	.984	FDS40
3794403	KSEMP4500FDS45A1M	KSEMP4500FDS45A1M	45,00	1.772	18,00	.7087	28,8	1.132	25,0	.984	FDS45
3794404	KSEMP4600FDS45A1M	KSEMP4600FDS45A1M	46,00	1.811	19,00	.7480	28,9	1.139	25,0	.984	FDS45
3794405	KSEMP4700FDS45A1M	KSEMP4700FDS45A1M	47,00	1.850	20,00	.7874	29,1	1.146	25,0	.984	FDS45
3794934	KSEMP4763FDS45A1M	KSEMP1875FDS45A1	47,63	1.875	21,00	.8268	29,3	1.153	25,0	.984	FDS45
3794406	KSEMP4800FDS45A1M	KSEMP4800FDS45A1M	48,00	1.890	21,00	.8268	29,3	1.153	25,0	.984	FDS45
3794407	KSEMP4900FDS45A1M	KSEMP4900FDS45A1M	49,00	1.929	22,00	.8661	29,5	1.160	25,0	.984	FDS45
3742211	KSEMP5000FDS50A1M	KSEMP5000FDS50A1M	50,00	1.969	23,00	.9055	34,8	1.372	30,0	1.181	FDS50
3794935	KSEMP5080FDS50A1M	KSEMP2000FDS50A1	50,80	2.000	24,00	.9449	35,0	1.379	30,0	1.181	FDS50
3794408	KSEMP5100FDS50A1M	KSEMP5100FDS50A1M	51,00	2.008	24,00	.9449	35,0	1.379	30,0	1.181	FDS50
3794409	KSEMP5200FDS50A1M	KSEMP5200FDS50A1M	52,00	2.047	25,00	.9843	35,2	1.386	30,0	1.181	FDS50
3794410	KSEMP5300FDS50A1M	KSEMP5300FDS50A1M	53,00	2.087	26,00	1.0236	35,4	1.392	30,0	1.181	FDS50
3794936	KSEMP5398FDS50A1M	KSEMP2125FDS50A1	53,98	2.125	27,00	1.0630	35,6	1.399	30,0	1.181	FDS50
3794411	KSEMP5400FDS50A1M	KSEMP5400FDS50A1M	54,00	2.126	27,00	1.0630	35,6	1.399	30,0	1.181	FDS50
3794412	KSEMP5500FDS50A1M	KSEMP5500FDS50A1M	55,00	2.165	28,00	1.1024	35,7	1.406	30,0	1.181	FDS50
3794413	KSEMP5600FDS56A1M	KSEMP5600FDS56A1M	56,00	2.205	20,00	.7874	34,3	1.351	30,0	1.181	FDS56
3794414	KSEMP5700FDS56A1M	KSEMP5700FDS56A1M	57,00	2.244	21,00	.8268	34,5	1.358	30,0	1.181	FDS56
3794937	KSEMP5715FDS56A1M	KSEMP2250FDS56A1	57,15	2.250	21,00	.8268	34,5	1.358	30,0	1.181	FDS56
3794415	KSEMP5800FDS56A1M	KSEMP5800FDS56A1M	58,00	2.284	22,00	.8661	34,7	1.365	30,0	1.181	FDS56
3794416	KSEMP5900FDS56A1M	KSEMP5900FDS56A1M	59,00	2.323	23,00	.9055	34,8	1.372	30,0	1.181	FDS56
3794417	KSEMP6000FDS56A1M	KSEMP6000FDS56A1M	60,00	2.362	24,00	.9449	35,0	1.379	30,0	1.181	FDS56
3794938	KSEMP6033FDS56A1M	KSEMP2375FDS56A1	60,33	2.375	24,00	.9449	35,0	1.379	30,0	1.181	FDS56
3794418	KSEMP6100FDS56A1M	KSEMP6100FDS56A1M	61,00	2.402	25,00	.9843	35,2	1.386	30,0	1.181	FDS56
3794419	KSEMP6200FDS56A1M	KSEMP6200FDS56A1M	62,00	2.441	26,00	1.0236	35,4	1.392	30,0	1.181	FDS56
3794420	KSEMP6300FDS63A1M	KSEMP6300FDS63A1M	63,00	2.480	27,00	1.0630	41,8	1.643	36,0	1.417	FDS63
3794939	KSEMP6350FDS63A1M	KSEMP2500FDS63A1	63,50	2.500	28,00	1.1024	41,9	1.650	36,0	1.417	FDS63
3794421	KSEMP6400FDS63A1M	KSEMP6400FDS63A1M	64,00	2.520	28,00	1.1024	41,9	1.650	36,0	1.417	FDS63
3794422	KSEMP6500FDS63A1M	KSEMP6500FDS63A1M	65,00	2.559	29,00	1.1417	42,1	1.657	36,0	1.417	FDS63
3794423	KSEMP6600FDS63A1M	KSEMP6600FDS63A1M	66,00	2.598	30,00	1.1811	42,3	1.664	36,0	1.417	FDS63
3794940	KSEMP6668FDS63A1M	KSEMP2625FDS63A1	66,68	2.625	31,00	1.2205	42,5	1.671	36,0	1.417	FDS63
3794424	KSEMP6700FDS63A1M	KSEMP6700FDS63A1M	67,00	2.638	31,00	1.2205	42,5	1.671	36,0	1.417	FDS63
3794425	KSEMP6800FDS63A1M	KSEMP6800FDS63A1M	68,00	2.677	32,00	1.2598	42,6	1.678	36,0	1.417	FDS63
3794426	KSEMP6900FDS63A1M	KSEMP6900FDS63A1M	69,00	2.717	33,00	1.2992	42,8	1.685	36,0	1.417	FDS63
3794941	KSEMP6985FDS63A1M	KSEMP2750FDS63A1	69,85	2.750	34,00	1.3386	43,0	1.692	36,0	1.417	FDS63
3742212	KSEMP7000FDS63A1M	KSEMP7000FDS63A1M	70,00	2.756	34,00	1.3386	43,0	1.692	36,0	1.417	FDS63
6041904	KSEMP7100FDS71A1M	KSEMP7100FDS71A1M	71,00	2.795	26,00	1.0240	46,8	1.842	46,8	1.842	FDS71
5397513	KSEMP7200FDS71A1M	KSEMP7200FDS71A1M	72,00	2.835	27,00	1.0630	47,0	1.849	47,0	1.849	FDS71
6041906	KSEMP7300FDS71A1M	KSEMP7300FDS71A1M	73,00	2.874	28,00	1.1020	47,1	1.855	47,1	1.855	FDS71
6041931	KSEMP7303FDS71A1M	KSEMP2875FDS71A1	73,03	2.875	28,00	1.1020	47,1	1.855	47,1	1.855	FDS71
5397514	KSEMP7400FDS71A1M	KSEMP7400FDS71A1M	74,00	2.913	29,00	1.1420	47,3	1.863	47,3	1.863	FDS71
6041907	KSEMP7500FDS71A1M	KSEMP7500FDS71A1M	75,00	2.953	30,00	1.1810	47,5	1.869	47,5	1.869	FDS71

(continued)

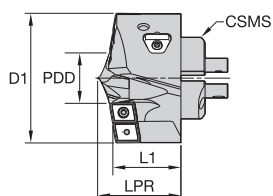
(KSEM PLUS A1 Heads 28–101,60mm (1.102–4") — continued)

order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
5397515	KSEMP7600FDS71A1M	KSEMP7600FDS71A1M	76,00	2.992	31,00	1.2200	47,7	1.876	47,7	1.876	FDS71
5397516	KSEMP7620FDS71A1M	KSEMP3000FDS71A1	76,20	3.000	31,00	1.2200	47,7	1.876	47,7	1.876	FDS71
6041908	KSEMP7700FDS71A1M	KSEMP7700FDS71A1M	77,00	3.031	32,00	1.2600	47,8	1.883	47,8	1.883	FDS71
5397517	KSEMP7800FDS71A1M	KSEMP7800FDS71A1M	78,00	3.071	33,00	1.2990	48,0	1.890	48,0	1.890	FDS71
6041909	KSEMP7900FDS71A1M	KSEMP7900FDS71A1M	79,00	3.110	34,00	1.3390	48,2	1.897	48,2	1.897	FDS71
6041932	KSEMP7938FDS80A1M	KSEMP3125FDS80A1	79,38	3.125	31,00	1.2200	52,8	2.077	52,8	2.077	FDS80
5397518	KSEMP8000FDS80A1M	KSEMP8000FDS80A1M	80,00	3.150	31,00	1.2200	52,8	2.077	52,8	2.077	FDS80
6041910	KSEMP8100FDS80A1M	KSEMP8100FDS80A1M	81,00	3.189	32,00	1.2600	52,9	2.085	52,9	2.085	FDS80
5397519	KSEMP8200FDS80A1M	KSEMP8200FDS80A1M	82,00	3.228	33,00	1.2992	53,1	2.091	53,1	2.091	FDS80
5397550	KSEMP8255FDS80A1M	KSEMP3250FDS80A1	82,55	3.250	34,00	1.3386	53,3	2.098	53,3	2.098	FDS80
6041921	KSEMP8300FDS80A1M	KSEMP8300FDS80A1M	83,00	3.268	34,00	1.3390	53,3	2.098	53,3	2.098	FDS80
5397551	KSEMP8400FDS80A1M	KSEMP8400FDS80A1M	84,00	3.307	35,00	1.3780	53,5	2.105	53,5	2.105	FDS80
6041922	KSEMP8500FDS80A1M	KSEMP8500FDS80A1M	85,00	3.346	36,00	1.4170	53,6	2.112	53,6	2.112	FDS80
6041933	KSEMP8573FDS80A1M	KSEMP3375FDS80A1	85,73	3.375	37,00	1.4570	53,8	2.119	53,8	2.119	FDS80
5397552	KSEMP8600FDS80A1M	KSEMP8600FDS80A1M	86,00	3.386	37,00	1.4567	53,8	2.119	53,8	2.119	FDS80
6041923	KSEMP8700FDS80A1M	KSEMP8700FDS80A1M	87,00	3.425	38,00	1.4960	54,0	2.126	54,0	2.126	FDS80
5397553	KSEMP8800FDS80A1M	KSEMP8800FDS80A1M	88,00	3.465	39,00	1.5354	54,2	2.133	54,2	2.133	FDS80
5397554	KSEMP8890FDS80A1M	KSEMP3500FDS80A1	88,90	3.500	40,00	1.5748	54,3	2.140	54,3	2.140	FDS80
6041924	KSEMP8900FDS80A1M	KSEMP8900FDS80A1M	89,00	3.504	40,00	1.5750	54,3	2.140	54,3	2.140	FDS80
5397555	KSEMP9000FDS90A1M	KSEMP9000FDS90A1M	90,00	3.543	37,00	1.4567	59,2	2.332	59,2	2.332	FDS90
6041925	KSEMP9100FDS90A1M	KSEMP9100FDS90A1M	91,00	3.583	38,00	1.4960	59,4	2.339	59,4	2.339	FDS90
5397556	KSEMP9200FDS90A1M	KSEMP9200FDS90A1M	92,00	3.622	39,00	1.5354	59,6	2.346	59,6	2.346	FDS90
6041934	KSEMP9208FDS90A1M	KSEMP3625FDS90A1	92,08	3.625	39,00	1.5350	59,6	2.346	59,6	2.346	FDS90
6041926	KSEMP9300FDS90A1M	KSEMP9300FDS90A1M	93,00	3.661	40,00	1.5750	59,7	2.352	59,7	2.352	FDS90
5397557	KSEMP9400FDS90A1M	KSEMP9400FDS90A1M	94,00	3.701	26,00	1.0236	58,0	2.283	58,0	2.283	FDS90
6041927	KSEMP9500FDS90A1M	KSEMP9500FDS90A1M	95,00	3.740	27,00	1.0630	58,2	2.290	58,2	2.290	FDS90
5397558	KSEMP9525FDS90A1M	KSEMP3750FDS90A1	95,25	3.750	27,00	1.0630	58,3	2.297	58,3	2.297	FDS90
5397559	KSEMP9600FDS90A1M	KSEMP9600FDS90A1M	96,00	3.780	28,00	1.1024	58,3	2.297	58,3	2.297	FDS90
6041928	KSEMP9700FDS90A1M	KSEMP9700FDS90A1M	97,00	3.819	29,00	1.1420	58,5	2.304	58,5	2.304	FDS90
5397560	KSEMP9800FDS90A1M	KSEMP9800FDS90A1M	98,00	3.858	30,00	1.1811	58,7	2.311	58,7	2.311	FDS90
6041935	KSEMP9843FDS90A1M	KSEMP3875FDS90A1	98,43	3.875	31,00	1.2200	58,9	2.317	58,9	2.317	FDS90
6041929	KSEMP9900FDS90A1M	KSEMP9900FDS90A1M	99,00	3.898	31,00	1.2200	58,9	2.317	58,9	2.317	FDS90
6041930	KSEMP10000FDS90A1M	KSEMP10000FDS90A1M	100,00	3.937	32,00	1.2600	59,0	2.324	59,0	2.324	FDS90
5397561	KSEMP10160FDS90A1M	KSEMP4000FDS90A1	101,60	4.000	34,00	1.3390	59,4	2.338	59,4	2.338	FDS90

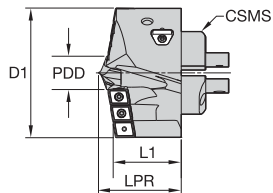
- To ensure 100% system stability, KSEM™ inserts used for KSEM PLUS should not be reground.
- KSEM PLUS heads are shipped with all insert screws.
- KSEM PLUS B1 heads are shipped with two or three wrenches, one for the KSEM insert, one for DFC™ inserts and DPA guiding pads, as well as for assembling the head onto the tool body. One additional wrench might be added depending on the size of the guiding pad.
- Order KSEM PLUS shanks using connection coupling size (CSMS) to determine which heads go with each shank.
- PDD in the callout drawing refers to the D1 of the KSEM, HPGM, and HPCM inserts for use with KSEM PLUS.
- Order inserts (KSEM, DFC) for KSEM PLUS separately.



2 x DFC
diameter: 28–70,34mm



4 x DFC
diameter: 70,35–93,34mm



6 x DFC
diameter: 93,35–127mm

■ KSEM PLUS B1 Heads 28–101,60mm (1.102–4")

order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
5115736	KSEMP2800FDS28B1M	KSEMP2800FDS28B1M	28,00	1.102	14,00	.5512	28,1	1.105	25,0	.984	FDS28
5115737	KSEMP2858FDS28B1M	KSEMP1125FDS28B1	28,58	1.125	15,00	.5906	28,2	1.110	25,0	.984	FDS28
5115738	KSEMP2900FDS28B1M	KSEMP2900FDS28B1M	29,00	1.142	15,00	.5906	28,2	1.111	25,0	.984	FDS28
5115739	KSEMP2937FDS28B1M	KSEMP1156FDS28B1	29,36	1.156	16,00	.6299	28,4	1.118	25,0	.984	FDS28
5116010	KSEMP3000FDS28B1M	KSEMP3000FDS28B1M	30,00	1.181	16,00	.6299	28,4	1.118	25,0	.984	FDS28
5116011	KSEMP3017FDS28B1M	KSEMP1188FDS28B1	30,18	1.188	17,00	.6693	28,6	1.125	25,0	.984	FDS28
5116012	KSEMP3096FDS28B1M	KSEMP1219FDS28B1	30,96	1.219	17,00	.6693	28,6	1.125	25,0	.984	FDS28
5116013	KSEMP3100FDS28B1M	KSEMP3100FDS28B1M	31,00	1.220	17,00	.6693	28,6	1.125	25,0	.984	FDS28
5116014	KSEMP3175FDS32B1M	KSEMP1250FDS32B1	31,75	1.250	15,00	.5906	28,2	1.111	25,0	.984	FDS32
5116015	KSEMP3200FDS32B1M	KSEMP3200FDS32B1M	32,00	1.260	15,00	.5906	28,2	1.111	25,0	.984	FDS32
5116016	KSEMP3300FDS32B1M	KSEMP3300FDS32B1M	33,00	1.299	16,00	.6299	28,4	1.118	25,0	.984	FDS32
5116017	KSEMP3320FDS32B1M	KSEMP3320FDS32B1M	33,20	1.307	16,00	.6299	28,4	1.118	25,0	.984	FDS32
5116018	KSEMP3334FDS32B1M	KSEMP1313FDS32B1	33,35	1.313	17,00	.6693	28,6	1.125	25,0	.984	FDS32
5116019	KSEMP3400FDS32B1M	KSEMP3400FDS32B1M	34,00	1.339	17,00	.6693	28,6	1.125	25,0	.984	FDS32
5116030	KSEMP3493FDS32B1M	KSEMP1375FDS32B1	34,93	1.375	18,00	.7087	28,8	1.132	25,0	.984	FDS32
5116031	KSEMP3500FDS32B1M	KSEMP3500FDS32B1M	35,00	1.378	18,00	.7087	28,8	1.132	25,0	.984	FDS32
5116032	KSEMP3600FDS36B1M	KSEMP3600FDS36B1M	36,00	1.417	13,00	.5118	27,9	1.098	25,0	.984	FDS36
5116033	KSEMP3651FDS36B1M	KSEMP1438FDS36B1	36,53	1.438	14,00	.5512	28,1	1.105	25,0	.984	FDS36
5116034	KSEMP3700FDS36B1M	KSEMP3700FDS36B1M	37,00	1.457	14,00	.5512	28,1	1.105	25,0	.984	FDS36
5116035	KSEMP3750FDS36B1M	KSEMP3750FDS36B1M	37,50	1.476	15,00	.5906	28,2	1.111	25,0	.984	FDS36

(continued)

(KSEM PLUS B1 Heads 28–101,60mm (1.102–4") — continued)

order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
5116036	KSEMP3800FDS36B1M	KSEMP3800FDS36B1M	38,00	1.496	15,00	.5906	28,2	1.111	25,0	.984	FDS36
5116037	KSEMP3810FDS36B1M	KSEMP1500FDS36B1	38,10	1.500	15,00	.5906	28,2	1.111	25,0	.984	FDS36
5116038	KSEMP3900FDS36B1M	KSEMP3900FDS36B1M	39,00	1.535	16,00	.6299	28,4	1.118	25,0	.984	FDS36
5116039	KSEMP3920FDS36B1M	KSEMP3920FDS36B1M	39,20	1.543	16,00	.6299	28,4	1.118	25,0	.984	FDS36
5116040	KSEMP3970FDS36B1M	KSEMP1563FDS36B1	39,70	1.563	17,00	.6693	28,6	1.125	25,0	.984	FDS36
5116041	KSEMP4000FDS40B1M	KSEMP4000FDS40B1M	40,00	1.575	17,00	.6693	33,8	1.330	30,0	1.181	FDS40
5116042	KSEMP4100FDS40B1M	KSEMP4100FDS40B1M	41,00	1.614	18,00	.7087	34,0	1.337	30,0	1.181	FDS40
5116043	KSEMP4128FDS40B1M	KSEMP1625FDS40B1	41,28	1.625	18,00	.7087	34,0	1.337	30,0	1.181	FDS40
5116044	KSEMP4200FDS40B1M	KSEMP4200FDS40B1M	42,00	1.654	19,00	.7480	34,1	1.344	30,0	1.181	FDS40
5116045	KSEMP4300FDS40B1M	KSEMP4300FDS40B1M	43,00	1.693	20,00	.7874	34,3	1.351	30,0	1.181	FDS40
5116046	KSEMP4400FDS40B1M	KSEMP4400FDS40B1M	44,00	1.732	21,00	.8268	34,5	1.358	30,0	1.181	FDS40
5116047	KSEMP4445FDS40B1M	KSEMP1750FDS40B1	44,45	1.750	22,00	.8661	34,7	1.365	30,0	1.181	FDS40
5116098	KSEMP4500FDS45B1M	KSEMP4500FDS45B1M	45,00	1.772	18,00	.7087	34,0	1.337	30,0	1.181	FDS45
5116099	KSEMP4600FDS45B1M	KSEMP4600FDS45B1M	46,00	1.811	19,00	.7480	34,1	1.344	30,0	1.181	FDS45
5116110	KSEMP4700FDS45B1M	KSEMP4700FDS45B1M	47,00	1.850	20,00	.7874	34,3	1.351	30,0	1.181	FDS45
5116111	KSEMP4763FDS45B1M	KSEMP1875FDS45B1	47,63	1.875	21,00	.8268	34,5	1.358	30,0	1.181	FDS45
5116112	KSEMP4800FDS45B1M	KSEMP4800FDS45B1M	48,00	1.890	21,00	.8268	34,5	1.358	30,0	1.181	FDS45
5116113	KSEMP4900FDS45B1M	KSEMP4900FDS45B1M	49,00	1.929	22,00	.8661	34,7	1.365	30,0	1.181	FDS45
5116114	KSEMP5000FDS50B1M	KSEMP5000FDS50B1M	50,00	1.969	23,00	.9055	40,0	1.577	35,0	1.378	FDS50
5116115	KSEMP5080FDS50B1M	KSEMP2000FDS50B1	50,80	2.000	24,00	.9449	40,2	1.584	35,0	1.378	FDS50
5116116	KSEMP5100FDS50B1M	KSEMP5100FDS50B1M	51,00	2.008	24,00	.9449	40,2	1.584	35,0	1.378	FDS50
5116117	KSEMP5200FDS50B1M	KSEMP5200FDS50B1M	52,00	2.047	25,00	.9843	40,4	1.590	35,0	1.378	FDS50
5116118	KSEMP5300FDS50B1M	KSEMP5300FDS50B1M	53,00	2.087	26,00	1.0236	40,6	1.597	35,0	1.378	FDS50
5116119	KSEMP5398FDS50B1M	KSEMP2125FDS50B1	53,98	2.125	27,00	1.0630	40,8	1.604	35,0	1.378	FDS50
5116120	KSEMP5400FDS50B1M	KSEMP5400FDS50B1M	54,00	2.126	27,00	1.0630	40,8	1.604	35,0	1.378	FDS50
5116121	KSEMP5500FDS50B1M	KSEMP5500FDS50B1M	55,00	2.165	28,00	1.1024	40,9	1.611	35,0	1.378	FDS50
5116122	KSEMP5600FDS56B1M	KSEMP5600FDS56B1M	56,00	2.205	20,00	.7874	39,5	1.556	35,0	1.378	FDS56
5116123	KSEMP5700FDS56B1M	KSEMP5700FDS56B1M	57,00	2.244	21,00	.8268	39,7	1.563	35,0	1.378	FDS56
5116124	KSEMP5715FDS56B1M	KSEMP2250FDS56B1	57,15	2.250	21,00	.8268	39,7	1.563	35,0	1.378	FDS56
5116125	KSEMP5800FDS56B1M	KSEMP5800FDS56B1M	58,00	2.283	22,00	.8661	39,9	1.570	35,0	1.378	FDS56
5116126	KSEMP5900FDS56B1M	KSEMP5900FDS56B1M	59,00	2.323	23,00	.9055	40,0	1.577	35,0	1.378	FDS56
5116127	KSEMP6000FDS56B1M	KSEMP6000FDS56B1M	60,00	2.362	24,00	.9449	40,2	1.584	35,0	1.378	FDS56
5116128	KSEMP6033FDS56B1M	KSEMP2375FDS56B1	60,33	2.375	24,00	.9449	40,2	1.584	35,0	1.378	FDS56
5116129	KSEMP6100FDS56B1M	KSEMP6100FDS56B1M	61,00	2.402	25,00	.9843	40,4	1.590	35,0	1.378	FDS56
5116130	KSEMP6200FDS56B1M	KSEMP6200FDS56B1M	62,00	2.441	26,00	1.0236	40,6	1.597	35,0	1.378	FDS56
5116131	KSEMP6300FDS63B1M	KSEMP6300FDS63B1M	63,00	2.480	27,00	1.0630	46,0	1.809	40,0	1.575	FDS63
5116132	KSEMP6350FDS63B1M	KSEMP2500FDS63B1	63,50	2.500	28,00	1.1024	46,1	1.816	40,0	1.575	FDS63
5116133	KSEMP6400FDS63B1M	KSEMP6400FDS63B1M	64,00	2.520	28,00	1.1024	46,1	1.816	40,0	1.575	FDS63
5116134	KSEMP6500FDS63B1M	KSEMP6500FDS63B1M	65,00	2.559	29,00	1.1417	46,3	1.823	40,0	1.575	FDS63
5116135	KSEMP6600FDS63B1M	KSEMP6600FDS63B1M	66,00	2.598	30,00	1.1811	46,5	1.830	40,0	1.575	FDS63
5116136	KSEMP6668FDS63B1M	KSEMP2625FDS63B1	66,68	2.625	31,00	1.2205	46,7	1.837	40,0	1.575	FDS63
5116137	KSEMP6700FDS63B1M	KSEMP6700FDS63B1M	67,00	2.638	31,00	1.2205	46,7	1.837	40,0	1.575	FDS63
5116138	KSEMP6800FDS63B1M	KSEMP6800FDS63B1M	68,00	2.677	32,00	1.2598	46,8	1.844	40,0	1.575	FDS63
5116139	KSEMP6900FDS63B1M	KSEMP6900FDS63B1M	69,00	2.717	33,00	1.2992	47,0	1.851	40,0	1.575	FDS63
5116140	KSEMP6985FDS63B1M	KSEMP2750FDS63B1	69,85	2.750	34,00	1.3386	47,2	1.858	40,0	1.575	FDS63
5116141	KSEMP7000FDS63B1M	KSEMP7000FDS63B1M	70,00	2.756	34,00	1.3386	47,2	1.858	40,0	1.575	FDS63
6041937	KSEMP7100FDS71B1M	KSEMP7100FDS71B1M	71,00	2.795	26,00	1.0240	47,9	1.885	40,0	1.575	FDS71
6041797	KSEMP7200FDS71B1M	KSEMP7200FDS71B1M	72,00	2.835	27,00	1.0630	48,1	1.892	40,0	1.575	FDS71
6041938	KSEMP7300FDS71B1M	KSEMP7300FDS71B1M	73,00	2.874	28,00	1.1020	48,2	1.899	40,0	1.575	FDS71
6042002	KSEMP7303FDS71B1M	KSEMP2875FDS71B1	73,03	2.875	28,00	1.1020	48,2	1.899	40,0	1.575	FDS71
6041798	KSEMP7400FDS71B1M	KSEMP7400FDS71B1M	74,00	2.913	29,00	1.1420	48,4	1.906	40,0	1.575	FDS71
6041939	KSEMP7500FDS71B1M	KSEMP7500FDS71B1M	75,00	2.953	30,00	1.1810	48,6	1.913	40,0	1.575	FDS71
6041799	KSEMP7600FDS71B1M	KSEMP7600FDS71B1M	76,00	2.992	31,00	1.2200	48,8	1.919	40,0	1.575	FDS71
5397562	KSEMP7620FDS71B1M	KSEMP3000FDS71B1	76,20	3.000	31,00	1.2200	48,8	1.919	48,8	1.919	FDS71
6041940	KSEMP7700FDS71B1M	KSEMP7700FDS71B1M	77,00	3.031	32,00	1.2600	48,9	1.927	40,0	1.575	FDS71
6041800	KSEMP7800FDS71B1M	KSEMP7800FDS71B1M	78,00	3.071	33,00	1.2990	49,1	1.933	40,0	1.575	FDS71

(continued)

(KSEM PLUS B1 Heads 28–101,60mm (1.102–4") — continued)

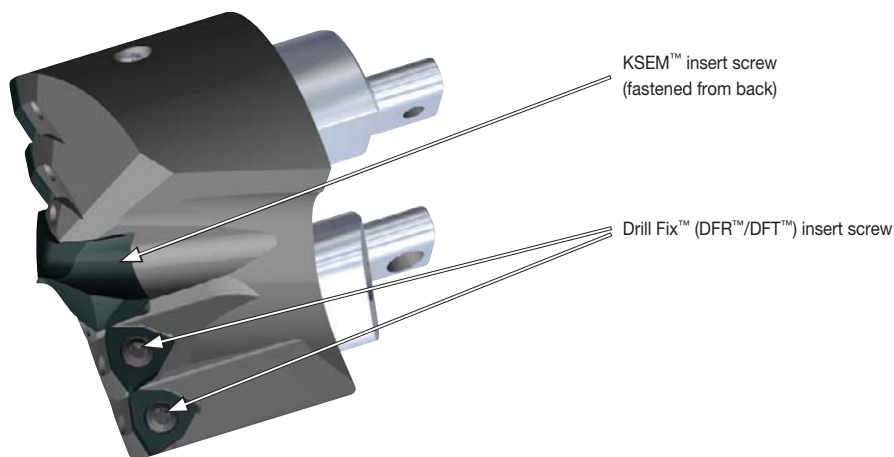
Modular Drills

order number	ISO catalogue number	ANSI catalogue number	D1		PDD		LPR		L1		CSMS system size
			mm	in	mm	in	mm	in	mm	in	
6041991	KSEMP7900FDS71B1M	KSEMP7900FDS71B1M	79,00	3.110	34,00	1.3390	49,3	1.940	40,0	1.575	FDS71
6042003	KSEMP7938FDS80B1M	KSEMP3125FDS80B1	79,38	3.125	31,00	1.2200	54,1	2.128	45,0	1.772	FDS80
6041881	KSEMP8000FDS80B1M	KSEMP8000FDS80B1M	80,00	3.150	31,00	1.2200	54,1	2.128	45,0	1.772	FDS80
6041992	KSEMP8100FDS80B1M	KSEMP8100FDS80B1M	81,00	3.189	32,00	1.2600	54,2	2.135	45,0	1.772	FDS80
6041882	KSEMP8200FDS80B1M	KSEMP8200FDS80B1M	82,00	3.228	33,00	1.2990	54,4	2.142	45,0	1.772	FDS80
5397563	KSEMP8255FDS80B1M	KSEMP3250FDS80B1	82,55	3.250	34,00	1.3386	54,6	2.149	54,6	2.149	FDS80
6041993	KSEMP8300FDS80B1M	KSEMP8300FDS80B1M	83,00	3.268	34,00	1.3390	54,6	2.149	45,0	1.772	FDS80
6041883	KSEMP8400FDS80B1M	KSEMP8400FDS80B1M	84,00	3.307	35,00	1.3780	54,8	2.156	45,0	1.772	FDS80
6041994	KSEMP8500FDS80B1M	KSEMP8500FDS80B1M	85,00	3.346	36,00	1.4170	54,9	2.163	45,0	1.772	FDS80
6042004	KSEMP8573FDS80B1M	KSEMP3375FDS80B1	85,73	3.375	37,00	1.4570	55,1	2.170	45,0	1.772	FDS80
6041884	KSEMP8600FDS80B1M	KSEMP8600FDS80B1M	86,00	3.386	37,00	1.4570	55,1	2.170	45,0	1.772	FDS80
6041995	KSEMP8700FDS80B1M	KSEMP8700FDS80B1M	87,00	3.425	38,00	1.4960	55,3	2.177	45,0	1.772	FDS80
6041885	KSEMP8800FDS80B1M	KSEMP8800FDS80B1M	88,00	3.465	39,00	1.5350	55,5	2.184	45,0	1.772	FDS80
5397564	KSEMP8890FDS80B1M	KSEMP3500FDS80B1	88,90	3.500	40,00	1.5748	55,6	2.190	55,6	2.190	FDS80
6041996	KSEMP8900FDS80B1M	KSEMP8900FDS80B1M	89,00	3.504	40,00	1.5750	55,6	2.190	45,0	1.772	FDS80
6041886	KSEMP9000FDS90B1M	KSEMP9000FDS90B1M	90,00	3.543	37,00	1.4570	60,3	2.375	50,0	1.969	FDS90
6041997	KSEMP9100FDS90B1M	KSEMP9100FDS90B1M	91,00	3.583	38,00	1.4960	60,5	2.382	50,0	1.969	FDS90
6041887	KSEMP9200FDS90B1M	KSEMP9200FDS90B1M	92,00	3.622	39,00	1.5350	60,7	2.389	50,0	1.969	FDS90
6042005	KSEMP9208FDS90B1M	KSEMP3625FDS90B1	92,08	3.625	39,00	1.5350	60,7	2.389	50,0	1.969	FDS90
6041998	KSEMP9300FDS90B1M	KSEMP9300FDS90B1M	93,00	3.661	40,00	1.5750	60,8	2.395	50,0	1.969	FDS90
6041888	KSEMP9400FDS90B1M	KSEMP9400FDS90B1M	94,00	3.701	26,00	1.0240	60,4	2.376	50,0	1.968	FDS90
6041999	KSEMP9500FDS90B1M	KSEMP9500FDS90B1M	95,00	3.740	27,00	1.0630	60,6	2.383	50,0	1.968	FDS90
5397565	KSEMP9525FDS90B1M	KSEMP3750FDS90B1	95,25	3.750	27,00	1.0630	60,6	2.383	60,6	2.383	FDS90
6041889	KSEMP9600FDS90B1M	KSEMP9600FDS90B1M	96,00	3.780	28,00	1.1020	60,7	2.390	50,0	1.968	FDS90
6042000	KSEMP9700FDS90B1M	KSEMP9700FDS90B1M	97,00	3.819	29,00	1.1420	60,9	2.398	50,0	1.968	FDS90
6041890	KSEMP9800FDS90B1M	KSEMP9800FDS90B1M	98,00	3.858	30,00	1.1810	61,1	2.404	50,0	1.968	FDS90
6042006	KSEMP9843FDS90B1M	KSEMP3875FDS90B1	98,43	3.875	31,00	1.2200	61,3	2.411	50,0	1.968	FDS90
6042001	KSEMP9900FDS90B1M	KSEMP9900FDS90B1M	99,00	3.898	31,00	1.2200	61,3	2.412	50,0	1.969	FDS90
6041901	KSEMP10000FDS90B1M	KSEMP10000FDS90B1M	100,00	3.937	32,00	1.2600	61,4	2.418	50,0	1.968	FDS90
5397566	KSEMP10160FDS90B1M	KSEMP4000FDS90B1	101,60	4.000	34,00	1.3390	61,8	2.432	61,8	2.432	FDS90

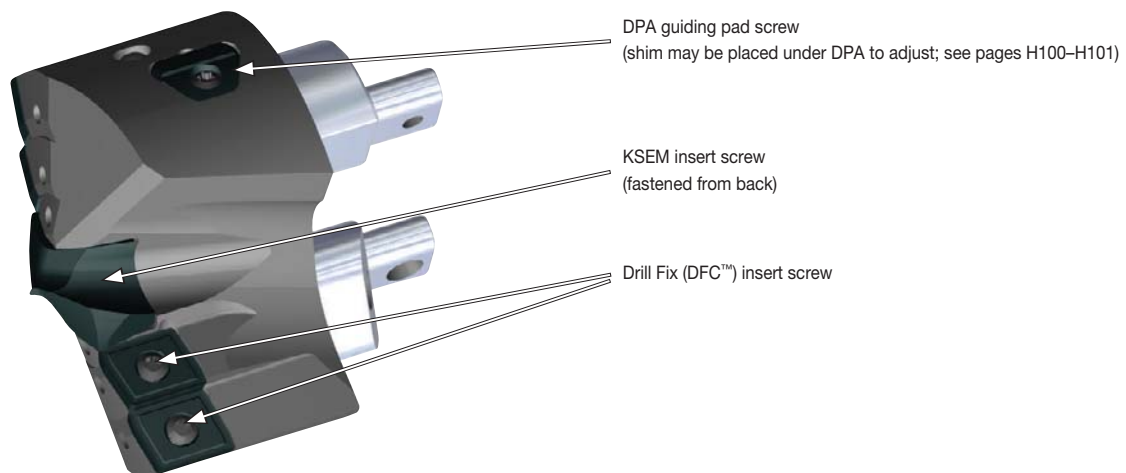
NOTE: When one screw is listed, it is for both insert and guiding pad. When two screws are listed, the first one is for the insert screw, and the second one is for the guiding pad. Find complete KSEM PLUS B1 product overview on pages H84–H86.

- The following pages consolidate required spare parts for KSEM PLUS heads.
- Tables show each spare part followed by required screw driver (if applicable).
- Adjustment shims for DPA guide pads on KSEM PLUS B1 heads come as easy-to-use shim packs.
- Please find reference for spare part location below.

KSEM PLUS A1 Heads • Spare Parts



KSEM PLUS B1 Heads • Spare Parts



■ KSEM PLUS A1 Heads 28–101,60mm (1.102–4") • Spare Parts

Modular Drills

D1		PDD			CSMS system size				
mm	in	mm	in			KSEM insert screw	KSEM wrench	Drill Fix insert screw	Drill Fix wrench
28,00	1.102	14,00	.551	FDS28		364.016	170.350	192.432	170.352
28,58	1.125	15,00	.591	FDS28		364.016	170.350	192.432	170.352
29,00	1.142	15,00	.591	FDS28		364.016	170.350	192.432	170.352
29,36	1.156	16,00	.630	FDS28		364.010	170.345	192.432	170.352
30,00	1.181	16,00	.630	FDS28		364.010	170.345	192.432	170.352
30,18	1.188	17,00	.669	FDS28		364.010	170.345	192.432	170.352
30,96	1.219	17,00	.669	FDS28		364.010	170.345	192.432	170.352
31,00	1.221	17,00	.669	FDS28		364.010	170.345	192.432	170.352
31,75	1.250	15,00	.591	FDS32		364.016	170.350	191.924	170.353
32,00	1.260	15,00	.591	FDS32		364.016	170.350	191.924	170.353
33,00	1.299	16,00	.630	FDS32		364.010	170.345	191.924	170.353
33,20	1.307	16,00	.630	FDS32		364.010	170.345	191.924	170.353
33,35	1.313	17,00	.669	FDS32		364.010	170.345	191.924	170.353
34,00	1.339	17,00	.669	FDS32		364.010	170.345	191.924	170.353
34,93	1.375	18,00	.709	FDS32		364.010	170.345	191.924	170.353
35,00	1.378	18,00	.709	FDS32		364.010	170.345	191.924	170.353
36,00	1.417	13,00	.512	FDS36		364.016	170.350	191.916	170.355
36,53	1.438	14,00	.551	FDS36		364.016	170.350	191.916	170.355
37,00	1.457	14,00	.551	FDS36		364.016	170.350	191.916	170.355
37,50	1.476	15,00	.591	FDS36		364.016	170.350	191.916	170.355
38,00	1.496	15,00	.591	FDS36		364.016	170.350	191.916	170.355
38,10	1.500	15,00	.591	FDS36		364.016	170.350	191.916	170.355
39,00	1.535	16,00	.630	FDS36		364.010	170.345	191.916	170.355
39,20	1.543	16,00	.630	FDS36		364.010	170.345	191.916	170.355
39,70	1.563	17,00	.669	FDS36		364.010	170.345	191.916	170.355
40,00	1.575	17,00	.669	FDS40		364.010	170.345	191.916	170.355
41,00	1.614	18,00	.709	FDS40		364.010	170.345	191.916	170.355
41,28	1.625	18,00	.709	FDS40		364.010	170.345	191.916	170.355
42,00	1.654	19,00	.748	FDS40		364.010	170.345	191.916	170.355
43,00	1.693	20,00	.787	FDS40		364.011	170.346	191.916	170.355
44,00	1.732	21,00	.827	FDS40		364.011	170.346	191.916	170.355
44,45	1.750	22,00	.866	FDS40		364.011	170.346	191.916	170.355
45,00	1.772	18,00	.709	FDS45		364.010	170.345	191.698	170.355
46,00	1.811	19,00	.748	FDS45		364.010	170.345	191.698	170.355
47,00	1.850	20,00	.787	FDS45		364.011	170.346	191.698	170.355
47,63	1.875	21,00	.827	FDS45		364.011	170.346	191.698	170.355
48,00	1.890	21,00	.827	FDS45		364.011	170.346	191.698	170.355
49,00	1.929	22,00	.866	FDS45		364.011	170.346	191.698	170.355
50,00	1.969	23,00	.906	FDS50		364.011	170.346	191.698	170.355
50,80	2.000	24,00	.945	FDS50		364.011	170.346	191.698	170.355
51,00	2.008	24,00	.945	FDS50		364.011	170.346	191.698	170.355
52,00	2.047	25,00	.984	FDS50		364.012	170.347	191.698	170.355
53,00	2.087	26,00	1.024	FDS50		364.012	170.347	191.698	170.355
53,98	2.125	27,00	1.063	FDS50		364.012	170.347	191.698	170.355
54,00	2.126	27,00	1.063	FDS50		364.012	170.347	191.698	170.355
55,00	2.165	28,00	1.102	FDS50		364.012	170.347	191.698	170.355
56,00	2.205	20,00	.787	FDS56		364.011	170.346	191.726	170.356
57,00	2.244	21,00	.827	FDS56		364.011	170.346	191.726	170.356
57,15	2.250	21,00	.827	FDS56		364.011	170.346	191.726	170.356
58,00	2.284	22,00	.866	FDS56		364.011	170.346	191.726	170.356
59,00	2.323	23,00	.906	FDS56		364.011	170.346	191.726	170.356
60,00	2.362	24,00	.945	FDS56		364.011	170.346	191.726	170.356
60,33	2.375	24,00	.945	FDS56		364.011	170.346	191.726	170.356
61,00	2.402	25,00	.984	FDS56		364.012	170.347	191.726	170.356
62,00	2.441	26,00	1.024	FDS56		364.012	170.347	191.726	170.356
63,00	2.480	27,00	1.063	FDS63		364.012	170.347	191.726	170.356

(continued)

(KSEM PLUS A1 Heads 28–101,60mm (1.102–4") • Spare Parts — continued)

D1		PDD			CSMS system size				
mm	in	mm	in			KSEM insert screw	KSEM wrench	Drill Fix insert screw	Drill Fix wrench
63,50	2.500	28,00	1.102	FDS63		364.012	170.347	191.726	170.356
64,00	2.520	28,00	1.102	FDS63		364.012	170.347	191.726	170.356
65,00	2.559	29,00	1.142	FDS63		364.013	170.348	191.726	170.356
66,00	2.598	30,00	1.181	FDS63		364.013	170.348	191.726	170.356
66,68	2.625	31,00	1.221	FDS63		364.013	170.348	191.726	170.356
67,00	2.638	31,00	1.221	FDS63		364.013	170.348	191.726	170.356
68,00	2.677	32,00	1.260	FDS63		364.013	170.348	191.726	170.356
69,00	2.717	33,00	1.299	FDS63		364.015	170.348	191.726	170.356
69,85	2.750	34,00	1.339	FDS63		364.015	170.348	191.726	170.356
70,00	2.756	34,00	1.339	FDS63		364.015	170.348	191.726	170.356
71,00	2.795	26,00	1.024	FDS71		364.012	170.347	191.916	170.355
72,00	2.835	27,00	1.063	FDS71		364.012	170.347	191.916	170.355
73,00	2.874	28,00	1.102	FDS71		364.012	170.347	191.916	170.355
73,03	2.875	28,00	1.102	FDS71		364.012	170.347	191.916	170.355
74,00	2.913	29,00	1.142	FDS71		364.013	170.365	191.916	170.355
75,00	2.953	30,00	1.181	FDS71		364.013	170.365	191.916	170.355
76,00	2.992	31,00	1.220	FDS71		364.013	170.365	191.916	170.355
76,20	3.000	31,00	1.220	FDS71		364.013	170.365	191.916	170.355
77,00	3.031	32,00	1.260	FDS71		364.013	170.365	191.916	170.355
78,00	3.071	33,00	1.299	FDS71		364.015	170.365	191.916	170.355
79,00	3.110	34,00	1.339	FDS71		364.015	170.365	191.916	170.355
79,38	3.125	31,00	1.220	FDS80		364.013	170.365	191.916	170.355
80,00	3.150	31,00	1.220	FDS80		364.013	170.365	191.916	170.355
81,00	3.189	32,00	1.260	FDS80		364.013	170.365	191.916	170.355
82,00	3.228	33,00	1.299	FDS80		364.015	170.365	191.916	170.355
82,55	3.250	34,00	1.339	FDS80		364.015	170.365	191.916	170.355
83,00	3.268	34,00	1.339	FDS80		364.015	170.365	191.916	170.355
84,00	3.307	35,00	1.378	FDS80		364.015	170.365	191.916	170.355
85,00	3.346	36,00	1.417	FDS80		364.015	170.365	191.916	170.355
85,73	3.375	37,00	1.457	FDS80		364.015	170.365	191.916	170.355
86,00	3.386	37,00	1.457	FDS80		364.015	170.365	191.916	170.355
87,00	3.425	38,00	1.496	FDS80		364.015	170.365	191.916	170.355
88,00	3.465	39,00	1.535	FDS80		364.015	170.365	191.916	170.355
88,90	3.500	40,00	1.575	FDS80		364.015	170.365	191.916	170.355
89,00	3.504	40,00	1.575	FDS80		364.015	170.365	191.916	170.355
90,00	3.543	37,00	1.457	FDS90		364.015	170.365	191.916	170.355
91,00	3.583	38,00	1.496	FDS90		364.015	170.365	191.916	170.355
92,00	3.622	39,00	1.535	FDS90		364.015	170.365	191.916	170.355
92,08	3.625	39,00	1.535	FDS90		364.015	170.365	191.916	170.355
93,00	3.661	40,00	1.575	FDS90		364.015	170.365	191.916	170.355
94,00	3.701	26,00	1.024	FDS90		364.012	170.355	191.916	170.355
95,00	3.740	27,00	1.063	FDS90		364.012	170.355	191.916	170.355
95,25	3.750	27,00	1.063	FDS90		364.012	170.355	191.916	170.355
96,00	3.780	28,00	1.102	FDS90		364.012	170.355	191.916	170.355
97,00	3.819	29,00	1.142	FDS90		364.013	170.365	191.916	170.355
98,00	3.858	30,00	1.181	FDS90		364.013	170.365	191.916	170.355
98,43	3.875	31,00	1.220	FDS90		364.013	170.365	191.916	170.355
99,00	3.898	31,00	1.220	FDS90		364.013	170.365	191.916	170.355
100,00	3.937	32,00	1.260	FDS90		364.013	170.365	191.916	170.355
101,60	4.000	34,00	1.339	FDS90		364.015	170.365	191.916	170.355

■ KSEM PLUS B1 Heads 28–101,60mm (1.102–4") • Spare Parts

Modular Drills

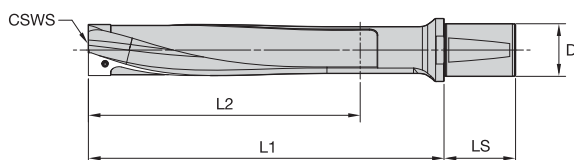
D1		PDD									
mm	in	mm	in	CSMS system size	KSEM insert screw	Torx wrench	DFC insert screw	Torx wrench	DPA guiding pad screw	Torx wrench	shim pack
28,00	1.102	14,00	.551	FDS28	364.016	170.350	192.432	170.352	192.432	170.352	193.554
28,58	1.125	15,00	.591	FDS28	364.016	170.350	192.432	170.352	192.432	170.352	193.554
29,00	1.142	15,00	.591	FDS28	364.016	170.350	192.432	170.352	192.432	170.352	193.554
29,36	1.156	16,00	.630	FDS28	364.010	170.345	192.432	170.352	192.432	170.352	193.554
30,00	1.181	16,00	.630	FDS28	364.010	170.345	192.432	170.352	192.432	170.352	193.554
30,18	1.188	17,00	.669	FDS28	364.010	170.345	192.432	170.352	192.432	170.352	193.554
30,96	1.219	17,00	.669	FDS28	364.010	170.345	192.432	170.352	192.432	170.352	193.554
31,00	1.220	17,00	.669	FDS28	364.010	170.345	192.432	170.352	192.432	170.352	193.554
31,75	1.250	15,00	.591	FDS32	364.016	170.350	191.924	170.353	191.924	170.353	193.555
32,00	1.260	15,00	.591	FDS32	364.016	170.350	191.924	170.353	191.924	170.353	193.555
33,00	1.299	16,00	.630	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
33,20	1.307	16,00	.630	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
33,35	1.313	17,00	.669	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
34,00	1.339	17,00	.669	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
34,93	1.375	18,00	.709	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
35,00	1.378	18,00	.709	FDS32	364.010	170.345	191.924	170.353	191.924	170.353	193.555
36,00	1.417	13,00	.512	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
36,53	1.438	14,00	.551	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
37,00	1.457	14,00	.551	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
37,50	1.476	15,00	.591	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
38,00	1.496	15,00	.591	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
38,10	1.500	15,00	.591	FDS36	364.016	170.350	191.916	170.355	191.924	170.353	193.555
39,00	1.535	16,00	.630	FDS36	364.010	170.345	191.916	170.355	191.924	170.353	193.555
39,20	1.543	16,00	.630	FDS36	364.010	170.345	191.916	170.355	191.924	170.353	193.555
39,70	1.563	17,00	.669	FDS36	364.010	170.345	191.916	170.355	191.924	170.353	193.555
40,00	1.575	17,00	.669	FDS40	364.010	170.345	191.916	170.355	191.924	170.353	193.555
41,00	1.614	18,00	.709	FDS40	364.010	170.345	191.916	170.355	191.924	170.353	193.555
41,28	1.625	18,00	.709	FDS40	364.010	170.345	191.916	170.355	191.924	170.353	193.555
42,00	1.654	19,00	.748	FDS40	364.010	170.345	191.916	170.355	191.924	170.353	193.555
43,00	1.693	20,00	.787	FDS40	364.011	170.346	191.916	170.355	191.924	170.353	193.555
44,00	1.732	21,00	.827	FDS40	364.011	170.346	191.916	170.355	191.924	170.353	193.555
44,45	1.750	22,00	.866	FDS40	364.011	170.346	191.916	170.355	191.924	170.353	193.555
45,00	1.772	18,00	.709	FDS45	364.010	170.345	191.916	170.355	191.924	170.353	193.555
46,00	1.811	19,00	.748	FDS45	364.010	170.345	191.916	170.355	191.924	170.353	193.555
47,00	1.850	20,00	.787	FDS45	364.011	170.346	191.916	170.355	191.924	170.353	193.555
47,63	1.875	21,00	.827	FDS45	364.011	170.346	191.916	170.355	191.924	170.353	193.555
48,00	1.890	21,00	.827	FDS45	364.011	170.346	191.916	170.355	191.924	170.353	193.555
49,00	1.929	22,00	.866	FDS45	364.011	170.346	191.916	170.355	191.924	170.353	193.555
50,00	1.969	23,00	.906	FDS50	364.011	170.346	191.916	170.355	191.916	170.355	193.556
50,80	2.000	24,00	.945	FDS50	364.011	170.346	191.916	170.355	191.916	170.355	193.556
51,00	2.008	24,00	.945	FDS50	364.011	170.346	191.916	170.355	191.916	170.355	193.556
52,00	2.047	25,00	.984	FDS50	364.012	170.347	191.916	170.355	191.916	170.355	193.556
53,00	2.087	26,00	1.024	FDS50	364.012	170.347	191.916	170.355	191.916	170.355	193.556
53,98	2.125	27,00	1.063	FDS50	364.012	170.347	191.916	170.355	191.916	170.355	193.556
54,00	2.126	27,00	1.063	FDS50	364.012	170.347	191.916	170.355	191.916	170.355	193.556
55,00	2.165	28,00	1.102	FDS50	364.012	170.347	191.916	170.355	191.916	170.355	193.556
56,00	2.205	20,00	.787	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
57,00	2.244	21,00	.827	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
57,15	2.250	21,00	.827	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
58,00	2.283	22,00	.866	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
59,00	2.323	23,00	.906	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
60,00	2.362	24,00	.945	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
60,33	2.375	24,00	.945	FDS56	364.011	170.346	191.726	170.356	191.916	170.355	193.556
61,00	2.402	25,00	.984	FDS56	364.012	170.347	191.726	170.356	191.916	170.355	193.556
62,00	2.441	26,00	1.024	FDS56	364.012	170.347	191.726	170.356	191.916	170.355	193.556
63,00	2.480	27,00	1.063	FDS63	364.012	170.347	191.726	170.356	191.916	170.355	193.556

(continued)

(KSEM PLUS B1 Heads 28–101,60mm (1.102–4") • Spare Parts — continued)

D1		PDD									
mm	in	mm	in	CSMS system size	KSEM insert screw	Torx wrench	DFC insert screw	Torx wrench	DPA guiding pad screw	Torx wrench	shim pack
63,50	2.500	28,00	1.102	FDS63	364.012	170.347	191.726	170.356	191.916	170.355	193.556
64,00	2.520	28,00	1.102	FDS63	364.012	170.347	191.726	170.356	191.916	170.355	193.556
65,00	2.559	29,00	1.142	FDS63	364.013	170.348	191.726	170.356	191.916	170.355	193.556
66,00	2.598	30,00	1.181	FDS63	364.013	170.348	191.726	170.356	191.916	170.355	193.556
66,68	2.625	31,00	1.221	FDS63	364.013	170.348	191.726	170.356	191.916	170.355	193.556
67,00	2.638	31,00	1.221	FDS63	364.013	170.348	191.726	170.356	191.916	170.355	193.556
68,00	2.677	32,00	1.260	FDS63	364.013	170.348	191.726	170.356	191.916	170.355	193.556
69,00	2.717	33,00	1.299	FDS63	364.015	170.348	191.726	170.356	191.916	170.355	193.556
69,85	2.750	34,00	1.339	FDS63	364.015	170.348	191.726	170.356	191.916	170.355	193.556
70,00	2.756	34,00	1.339	FDS63	364.015	170.348	191.726	170.356	191.916	170.355	193.556
71,00	2.795	26,00	1.024	FDS71	364.012	170.347	191.916	170.356	191.916	170.355	193.556
72,00	2.835	27,00	1.063	FDS71	364.012	170.347	191.916	170.356	191.916	170.355	193.556
73,00	2.874	28,00	1.102	FDS71	364.012	170.347	191.916	170.356	191.916	170.355	193.556
73,03	2.875	28,00	1.102	FDS71	364.012	170.347	191.916	170.356	191.916	170.355	193.556
74,00	2.913	29,00	1.142	FDS71	364.013	170.365	191.916	170.356	191.916	170.355	193.556
75,00	2.953	30,00	1.181	FDS71	364.013	170.365	191.916	170.356	191.916	170.355	193.556
76,00	2.992	31,00	1.220	FDS71	364.013	170.365	191.916	170.356	191.916	170.355	193.556
76,20	3.000	31,00	1.220	FDS71	364.013	170.365	191.916	170.355	191.916	170.356	193.556
77,00	3.031	32,00	1.260	FDS71	364.013	170.365	191.916	170.355	191.916	170.356	193.556
78,00	3.071	33,00	1.299	FDS71	364.015	170.365	191.916	170.355	191.916	170.356	193.556
79,00	3.110	34,00	1.339	FDS71	364.015	170.365	191.916	170.355	191.916	170.356	193.556
79,38	3.125	31,00	1.220	FDS80	364.013	170.365	191.916	170.355	191.916	170.356	193.556
80,00	3.150	31,00	1.220	FDS80	364.013	170.365	191.916	170.355	191.916	170.356	193.556
81,00	3.189	32,00	1.260	FDS80	364.013	170.365	191.916	170.355	191.916	170.356	193.556
82,00	3.228	33,00	1.299	FDS80	364.015	170.365	191.916	170.355	191.916	170.356	193.556
82,55	3.250	34,00	1.339	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
83,00	3.268	34,00	1.339	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
84,00	3.307	35,00	1.378	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
85,00	3.346	36,00	1.417	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
85,73	3.375	37,00	1.457	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
86,00	3.386	37,00	1.457	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
87,00	3.425	38,00	1.496	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
88,00	3.465	39,00	1.535	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
88,90	3.500	40,00	1.575	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
89,00	3.504	40,00	1.575	FDS80	364.015	170.355	191.916	170.355	191.916	170.356	193.556
90,00	3.543	37,00	1.457	FDS90	364.015	170.355	191.916	170.355	191.916	170.356	193.556
91,00	3.583	38,00	1.496	FDS90	364.015	170.355	191.916	170.355	191.916	170.356	193.556
92,00	3.622	39,00	1.535	FDS90	364.015	170.355	191.916	170.355	191.916	170.356	193.556
92,08	3.625	39,00	1.535	FDS90	364.015	170.355	191.916	170.355	191.916	170.356	193.556
93,00	3.661	40,00	1.575	FDS90	364.015	170.355	191.916	170.355	191.916	170.356	193.556
94,00	3.701	26,00	1.024	FDS90	364.012	170.355	191.916	170.355	191.916	170.356	193.556
95,00	3.740	27,00	1.063	FDS90	364.012	170.355	191.916	170.355	191.916	170.356	193.556
95,25	3.750	27,00	1.063	FDS90	364.012	170.355	191.916	170.355	191.916	170.356	193.556
96,00	3.780	28,00	1.102	FDS90	364.012	170.355	191.916	170.355	191.916	170.356	193.556
97,00	3.819	29,00	1.142	FDS90	364.013	170.355	191.916	170.355	191.916	170.356	193.556
98,00	3.858	30,00	1.181	FDS90	364.013	170.355	191.916	170.355	191.916	170.356	193.556
98,43	3.875	31,00	1.220	FDS90	364.013	170.355	191.916	170.355	191.916	170.356	193.556
99,00	3.898	31,00	1.220	FDS90	364.013	170.355	191.916	170.355	191.916	170.356	193.556
100,00	3.937	32,00	1.260	FDS90	364.013	170.355	191.916	170.355	191.916	170.356	193.556
101,60	4.000	34,00	1.339	FDS90	364.015	170.365	191.916	170.355	191.916	170.356	193.556

- Order KSEM PLUS heads according to the connection coupling size (CSWS).
- Order KSEM PLUS heads separately; see page H91–H96.
- Wrench will be shipped with KSEM PLUS head.
- Custom solution for cast iron application with twisted flutes available.



■ KSEM PLUS WD Shanks • 1.5 x D • Metric



1.5 x D catalogue number	CSWS system size	D	L1	L2	LS	clamp screw
WD32FDS28076M	FDS28	32	76	32	58	193.537
WD32FDS32082M	FDS32	32	82	34	58	193.523
WD32FDS36092M	FDS36	32	92	40	58	193.524
WD50FDS40100M	FDS40	50	100	43	68	193.524
WD50FDS45112M	FDS45	50	112	50	68	193.525
WD50FDS50122M	FDS50	50	122	54	68	193.525
WD50FDS56140M	FDS56	50	140	65	68	193.526
WD50FDS63154M	FDS63	50	154	71	68	193.526
WD50FDS71172M	FDS71	50	172	80	68	193.526
WD50FDS80192M	FDS80	50	192	90	68	193.545
WD50FDS90212M	FDS90	50	212	100	68	193.545



■ KSEM PLUS WD Shanks • 3 x D • Metric



3 x D catalogue number	CSWS system size	D	L1	L2	LS	clamp screw
WD32FDS28128M	FDS28	32	128	71	58	193.537
WD32FDS32146M	FDS32	32	146	85	58	193.523
WD32FDS36166M	FDS36	32	166	97	58	193.524
WD50FDS40183M	FDS40	50	183	107	68	193.524
WD50FDS45206M	FDS45	50	206	122	68	193.525
WD50FDS50228M	FDS50	50	228	135	68	193.525
WD50FDS56259M	FDS56	50	259	156	68	193.526
WD50FDS63289M	FDS63	50	289	174	68	193.526
WD50FDS71292M	FDS71	50	292	200	68	193.526
WD50FDS80327M	FDS80	50	327	225	68	193.545
WD50FDS90362M	FDS90	50	362	250	68	193.545



■ KSEM PLUS WD Shanks • 5 x D • Metric



5 x D	CSWS system size	D	L1	L2	LS	clamp screw
catalogue number						
WD32FDS28190M	FDS28	32	190	133	58	193.537
WD32FDS32216M	FDS32	32	216	155	58	193.523
WD32FDS36244M	FDS36	32	244	175	58	193.524
WD50FDS40271M	FDS40	50	271	195	68	193.524
WD50FDS45304M	FDS45	50	304	220	68	193.525
WD50FDS50338M	FDS50	50	338	245	68	193.525
WD50FDS56383M	FDS56	50	383	280	68	193.526
WD50FDS63429M	FDS63	50	429	314	68	193.526
WD50FDS71452M	FDS71	50	452	360	68	193.526
WD50FDS80507M	FDS80	50	507	405	68	193.545
WD50FDS90562M	FDS90	50	562	450	68	193.545

■ KSEM PLUS WD Shanks • 8 x D • Metric



8 x D	CSWS system size	D	L1	L2	LS	clamp screw
catalogue number						
WD32FDS28283M	FDS28	32	283	226	58	193.537
WD32FDS32321M	FDS32	32	321	260	58	193.523
WD32FDS36361M	FDS36	32	361	292	58	193.524
WD50FDS40403M	FDS40	50	403	327	68	193.524
WD50FDS45451M	FDS45	50	451	367	68	193.525
WD50FDS50503M	FDS50	50	503	410	68	193.525
WD50FDS56569M	FDS56	50	569	466	68	193.526
WD50FDS63639M	FDS63	50	639	524	68	193.526

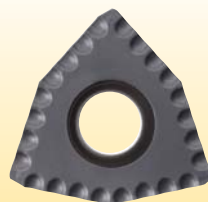
■ KSEM PLUS WD Shanks • 10 x D • Metric



10 x D	CSWS system size	D	L1	L2	LS	clamp screw
catalogue number						
WD32FDS28345M	FDS28	32	345	288	58	193.537
WD32FDS32391M	FDS32	32	391	330	58	193.523
WD32FDS36439M	FDS36	32	439	370	58	193.524
WD50FDS40491M	FDS40	50	491	415	68	193.524
WD50FDS45549M	FDS45	50	549	465	68	193.525
WD50FDS50613M	FDS50	50	613	520	68	193.525
WD50FDS56693M	FDS56	50	693	590	68	193.526
WD50FDS63779M	FDS63	50	779	664	68	193.526

KSEM PLUS Carbide Insert Recommendations

Material Group	Outboard/ Inboard	Insert Style	Grade	Page(s)	Comments
P	O	DFR-GD	KCU25, KCU40	H89	Recommended outboard insert style for working in all P-materials. Start with KCU40™ and use KCU25™ in stable conditions to achieve higher tool life.
		DFC-/DFT-HP		H90, H88	
		DFC-/DFT-DS	KCU40	H90, H88	Reduce feed rate by 10% to further improve chip formation in long-chipping steels and low carbon steel.
	I	KSEMP-HPG	KC7315	H87	Must use KSEMP centre inserts in P-materials to avoid excessive wear on head & inserts.
M	O	DFR-MD	KC7140	H89	Recommended outboard insert style for working in all M-materials.
		DFC-/DFT-MD		H90, H89	
		DFC-/DFT-DS	KCU40	H90, H88	Reduce feed rate by 20% to further improve chip formation and/or run with lower power consumption.
	I	KSEMP-HPG	KC7315	H87	Recommended inboard insert style for working in all M-materials.
		KSEM-PC	KC7135	H56, H87	For unstable conditions in stainless steel, use KSEM PC inserts.
		KSEM-HPL	KC7320	H50	If chip control issue resulting from centre insert occurs in M-materials, use KSEM HPL insert inboard. Reduction of feed rate up to 20% is recommended.
K	O	DFR-LD	KCU25	H89	Recommended insert styles for working in all K-Materials.
		DFC-/DFT-HP		H90, H88	
	I	KSEM-HPCCL	KC7410	H48, H87	
N	O	DFR-GD	KC7225	H89	Recommended outboard insert styles for working in all non-ferrous materials.
		DFC-/DFT-HP	KCU40	H90, H88	
		DFC-/DFT-DS	KCU40	H90, H88	Reduce feed rate by 15% for diameters <56mm and up to 50% for larger diameters to improve chip formation.
		DFR/DFT-ST	KD1425	J85	Use PCD tipped outboard when working with CFRP, CFRP/metal stacks and plastics (N3, N5, and N6).
	I	KSEMP-HPG	KC7315	H87	Recommended inboard insert style for working in all non-ferrous materials.
		KSEM-HPS	K715	—	This is a made-to-order item (uncoated/sharp) — use it to improve your results in N3, N5, and N6, if required.
S	O	DFR-GD	KC7140	H89	Recommended outboard insert style for working in all S-materials.
		DFC-/DFT-HP	KCU40	H90, H88	
		DFC-/DFT-DS	KCU40	H90, H88	Reduce feed rate by 20% to further improve chip formation and/or run with lower power consumption.
	I	KSEM-PC	KC7135	H56, H87	If centre breakage is an issue in S-materials, use KSEM PC insert inboard.



Need help with bad chip formation?

Our new DS geometry for DFT™ and DFC™ inserts on KSEM PLUS helps you to improve your performance in long chipping materials.

If chip formation is an issue, you may use our new DFT and DFC DS style inserts with the recommendations for feed rate adjustments given as indicated.

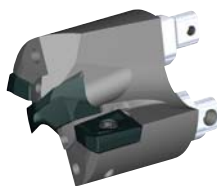
■ Modular Drill • KSEM PLUS™ • Metric • A1 and B1 Style

Metric										
Material Group	Condition	Cutting Speed — vc Range — m/min			Recommended Feed Rate (fz) by Diameter					
		min	Starting Value	max	Ø	KSEM 14....17 DFR/DFC04... 28,00–31,74	KSEM 15....18 DFT/DFC05... 31,74–35,99	KSEM 13....22 DFT/DFC06... 36,00–44,99	KSEM 18....28 DFT/DFC07... 45,00–55,99	KSEM 20....34 DFT/DFC09... 56,00–102,35
P	1	S	115	235	290	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	90	160	215	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	65	100	140	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	2	S	90	190	230	mm/r	0,160–0,280	0,160–0,280	0,200–0,360	0,200–0,450
		U	71	130	170	mm/r	0,160–0,280	0,160–0,280	0,200–0,360	0,200–0,450
		I	50	80	110	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
	3	S	90	180	230	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		U	70	120	170	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		I	50	70	106	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
	4	S	90	140	220	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		U	70	110	160	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		I	50	80	110	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
	5	S	90	130	210	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		U	70	100	150	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		I	50	70	100	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
	6	S	70	90	180	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		U	50	75	120	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
		I	40	60	100	mm/r	0,160–0,280	0,160–0,280	0,200–0,320	0,200–0,450
M	1	S	60	110	135	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	40	70	90	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	30	50	65	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	2	S	60	100	135	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	40	60	90	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	30	50	65	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	3	S	50	90	135	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	40	60	90	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	25	40	65	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	4	S	90	170	230	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		U	60	120	160	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		I	40	70	90	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
K	1	S	90	160	220	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		U	60	110	160	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		I	40	70	100	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
	2	S	90	160	220	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		U	60	110	160	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		I	40	70	100	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
	3	S	90	150	210	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		U	60	100	150	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
		I	35	60	90	mm/r	0,180–0,300	0,180–0,300	0,216–0,360	0,240–0,420
	4	S	150	240	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	160	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	100	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
N	1	S	150	220	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	160	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	100	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	2	S	150	200	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	150	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	100	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	3	S	150	200	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	140	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	90	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	4	S	150	200	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	140	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	90	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	5	S	150	200	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	140	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	90	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	6	S	150	200	360	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	100	140	240	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	60	90	160	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
	7	S	110	220	260	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		U	70	140	170	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
		I	45	90	110	mm/r	0,120–0,200	0,120–0,200	0,144–0,280	0,160–0,320
S	1	S	25	50	75	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	20	40	60	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	15	30	50	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	2	S	20	40	60	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	15	30	45	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	12	25	35	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	3	S	20	40	60	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	15	30	45	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	12	25	40	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
	4	S	20	40	60	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		U	15	30	45	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320
		I	12	25	40	mm/r	0,130–0,250	0,130–0,250	0,160–0,280	0,160–0,320

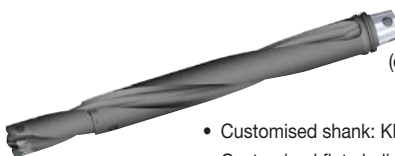


Application	Workpiece Shape	A1 Head	B1 Head
Flat Face		✓	✓
Cored Hole		✗	✓
Stacked Plates		✗	✓
Angled Exit (exit only!)		✓ <3°	✓ max 15°
Angled Entrance		✓ <3°	✓ <3°
Cross Holes		✗	✓ max 50% of D1

KSEM PLUS Customised Solution Capabilities:



- Intermediate head Ø.
- Custom head to use reground KSEM™ inserts.
- Heads for cross holes Ø = d1.



(example)

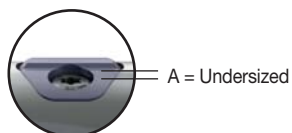
- Customised shank: KM™, HSK, VDI, ISO taper, etc.
- Customised flute helix.
- Step drill.



- Drill body up to L1 = 20 x D and total length of 1250mm.

Mounting DPA Guiding Pads on B1 Heads

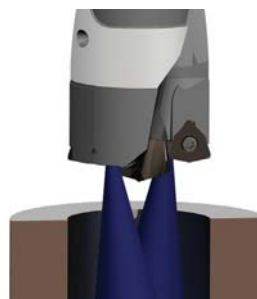
All B1 heads are delivered with preset guiding pads.



Measure radial undersize "A" of pad to cutting edge for both sides and adjust using shim set that comes with each head.

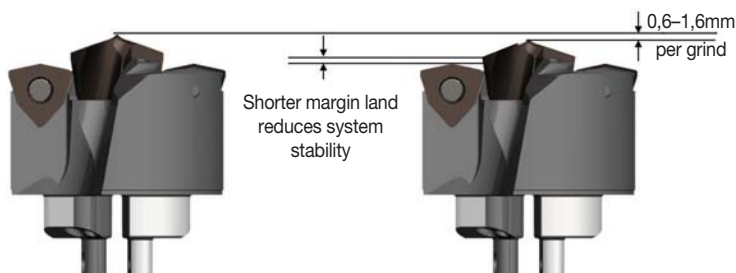
NOTE: For best results with slanted exits and in cross hole drilling, we recommend guiding pads adjustment results in an undersize of A = 30 µm (edge of guiding pads to cutting edges).

Coolant Recommendations



Internal coolant is recommended for optimum chip flow and tool life.

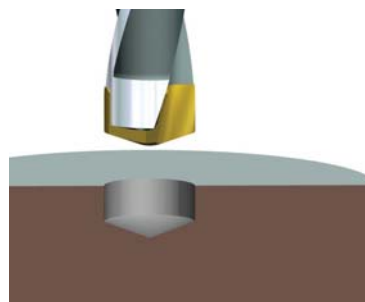
KSEM PLUS Piloting Insert SHOULD NOT Be Reground:



Only new KSEM PLUS inserts will provide consistency and process security on a KSEM PLUS modular drill system. If you want to reground, refer to our custom solution A1 and B1 heads.

NOTE: Reground KSEM PLUS inserts can be used in KSEM™ drills.

Piloting Instructions:



1. KSEM....PC Pilot drill Ø equal KSEMP Ø PDD
2. Drill 1mm deep from full diameter