

# Indexable Drills

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Indexable Drills

		standard						hole tolerance	standard range			customized solution range		
		P	M	K	N	S	H		diameter range			diameter range		
									D1 mm min-max	D1 inch min-max	drilling depth L/D1	D1 mm min-max	D1 inch min-max	drilling depth
	<b>DFR™</b> Indexable Drill Body Short-Hole Drilling	●	●	●	●	●	●	IT9-11	12,5-25	.500-1.039	2 x D 3 x D 4 x D	12,5-26	.500-1.023	1-5 x D
	<b>DFS™</b> Indexable Drill Body Short-Hole Drilling	●	●	●	●	●	●	IT9-11	24-55	.945-2.165	2 x D 3 x D 4 x D 5 x D	18-55	.708-2.165	1-5 x D
	<b>DFT™</b> Indexable Drill Body Short-Hole Drilling	●	●	●	●	●	●	IT9-11	16-83mm	.625-3.250	2.5 x D 4 x D	15,8-83	.622-3.250	1-5 x D
	<b>HTS-C</b> Indexable Drilling Tool Deep-Hole Drilling	●	●	●	●	●	●	IT9-11	20-45	.750-1.750	5 x D 8 x D	19,05-45	.749-1.750	1-20 x D
	<b>HTS-R</b> Indexable Drilling Tool Deep-Hole Drilling	●	●	●	●	●	●	IT9-11	40-55	1.574-2.165	10 x D	40-55	1.574-2.165	1-10 x D
	<b>HTS</b> Indexable Drilling Tool Deep-Hole Drilling	●	●	●	●	●	●	IT9-11	45-270	1.772-10.630	10 x D	45-540	1.772-21.259	1-10 x D
	<b>S2 S Countersinking</b> Countersinking Tool	●	●	●	●	●	●	IT9-11	15,1-46,2	.813-3.125	1 x D	11,5-150	.452-5.905	1-5 x D

In regard to insert and drill coatings, anything is possible. If a specific insert or drill is not suitable for your workpiece material, please contact our Engineered Solutions Department for an offer about special coatings and edge preparations.

\*Except for L/D 5 x D.

<sup>1)</sup> Other shank styles available as customized solution.

		■ standard capabilities <sup>1)</sup>								■ standard and □ customized solution capabilities								
coolant																		page(s)
	■		■ ■	■					■	■	■	■	■	□	□		J8-J18	
	■		■ ■	■	■				■	■	■	■	■*	□	□	□	J20-J35	
	■		■ ■	■	■				■	■	■	■	■	□	□		J37-J49	
	■		■ ■						■						□		J53-J61	
	■			■		■	■	■	■								J73-J79	
	■			■		■	■	■	■								J80-J94	
	■	■												■	□		J105-J107	

Indexable Drills



## Drill Fix™ DFR™, DFS™, and DFT™

### Primary Application

Drill short holes up to 5 x D with DFR, DFS, and DFT indexable drills in steel, cast iron, ductile iron, stainless steel, and non-ferrous materials. The Drill Fix portfolio covers the diameter range .500–3.250" (12,5–82mm).

Apply where speed and economy are prime considerations.

## Features and Benefits

### Drill Fix DFR

- Diameter range of 12,5–24mm in 2 x D, 3 x D, and 4 x D.
- Rectangular-shaped inserts offer the highest stability and feed rates at smaller sizes.
- Long body tool life due to soft starting cut, short chips, and low cutting forces.
- X-offset design to adjust diameter size on turning machines and optimize tolerances on machining centers.

### Drill Fix DFS

- Combines the benefits of a trigon-style DFT inboard insert and a square-style SP..X outboard insert.
- Standard diameter range from 1.000–2.500" (24–55mm) in 2 x D, 3 x D, 4 x D, and new 5 x D.
- Drill Fix DFT insert has inner insert for best centering capabilities.
- Squared-outboard insert offering four economic cutting edges.
- Highest feed rates and cutting speeds applicable due to highly stable tool body design.
- X-offset design to adjust diameter size on turning machines and optimize tolerances on machining centers.
- Beyond™ grades to achieve highest productivity, achieving outstanding results in steel, stainless steel, and cast iron.

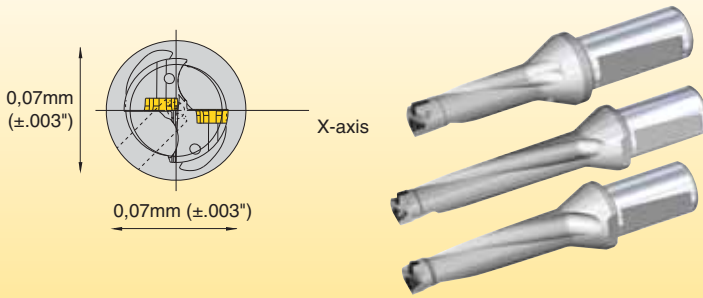


### Drill Fix™ DFT™

- One drill system that covers a large diameter range, from 1.000–3.250" (24–82mm) in 2.5 x D and 4 x D.
- Best centering capabilities due to trigon-shaped inserts used as inboard and outboard insert.
- Various insert grades and geometries available.
- Balanced cutting forces in the shank center for highest tool body stability.
- X-offset design to adjust diameter size on turning machines and optimize tolerances on machining centers.

**Stationary Applications**

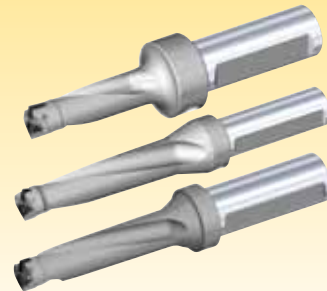
**Metric Drill Bodies with 2° Whistle Notch™**



Metric shank drills with a 2° Whistle Notch shank are easily mounted into inch turrets using a WD adaptor. Align the X-axis of the drill with the X-axis of the machine tool as described above. Accurate alignment is absolutely essential for good performance. The drill must be on center within the tolerance shown above. Angularity must not exceed 0,07mm (.003").

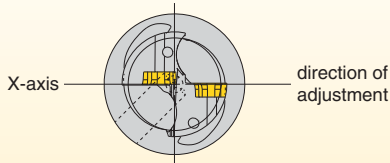
**Inch Bodies • Flange**

Drill Fix™ inch drills, with a flange, were designed for use on lathes or any machine where the tool remains stationary and the workpiece rotates. An "x" is marked on the flat of the X-axis of the drill to aid insert orientation on the machine tool. It is important to align the X-axis of the drill with the X-axis on the machine tool. Accurate alignment is absolutely essential for good performance. The drill must be on center, within the tolerance shown here. Angularity must not exceed 0,07mm (.003") within the designated drill depth.



**Drill Fix X-Adjustment**

**Applications Examples**

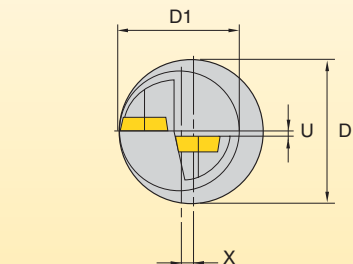
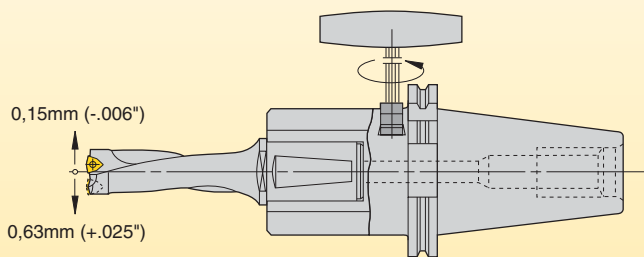


**Stationary Tool**

The X-adjustment must be made at the outer cutting edge, parallel to the surface of the outer insert when the turret of the turning machine is offset along the X-axis.

**Rotating Tool • Straight Shank**

Use an adjustable eccentric chuck with a steep taper to help offset the drill along the X-axis when machining with a rotating tool on a machining center.

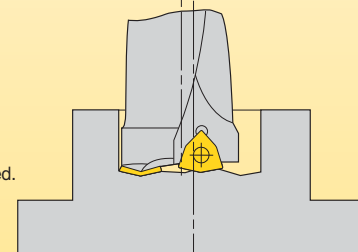


**X-Adjustment Description**

Different diameter holes can be drilled using the same Drill Fix drill. Holes with a diameter greater than the nominal diameter can be drilled directly into a solid. Intermediate dimensions are produced by means of the X-adjustment.

**Benefits**

- Eliminates the need for special tools for intermediate dimensions.
- Just a few drills cover a wide application range.
- Once precise adjustment of the desired diameter is made, tolerances of 0,05mm (± .002") are achieved.



Additional information on X-adjustment, as well as additional information to Drill Fix tools, is available on the Kennametal website, [www.kennametal.com](http://www.kennametal.com).

# Drill Fix™ DFR™

Drill Fix DFR offers maximum feed rates at diameter range 12,5–24mm at 2 x D, 3 x D, and 4 x D applications. Using rectangular-shaped inboard and outboard inserts enables soft starting cuts and short chips as well as enabling higher feed rates than small-size symmetrical-trigon or square inserts. Drill Fix DFR's low cutting forces provide long tool body life and highest stability at smallest sizes.

Furthermore, these inserts enable soft starting cuts and short chips. The low cutting forces of a Drill Fix DFR provide long tool body life and highest stability at smallest sizes.

## Features and Benefits

### Productivity and Profitability

- Achieve highest feed rates with rectangular-shaped inserts that offer a soft starting cut and highest stability.
- Use X-offset on turning machines to adjust the drill diameter, eliminating the need for specials in many applications and on machining centers, to reach tolerance optimization.
- Same insert size is used in each pocket, reducing inventory costs.

### Versatility

- Diameter range covering .500–1.000" (12,5–24mm).
- 2 x D, 3 x D, and 4 x D L/D ratios as standard.
- Various shanks as standard available: WD, SSF, and new KM-TS™.
- Multiple insert grades and geometries available.
- Use where feed rates are the limiting factor.
- Apply at straight holes, inclined entries and exits, interrupted cuts, and rough or welded entry surfaces.
- Eccentric chuck available as standard.

### Reliability

- Highest stability at smaller sizes due to rectangular-shaped insert.
- Same insert can be used as inboard or outboard insert. No risk of mixing up inner and outer insert.
- Low cutting forces resulting in long body tool life.

### Customization

- Intermediate diameters available as semi-standards.
- Engineered solutions available.
- Multistep drills available upon request.
- Left-hand version available.

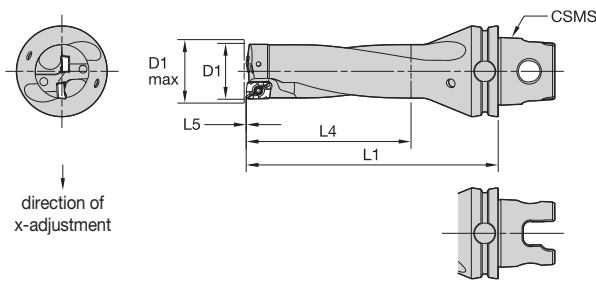
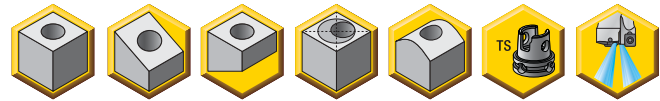


To learn more, [scan here](#).  
For instructions on how to scan, please see page xxix.





- Drill shipped with insert screws and Torx wrench.
- See page J95 for inserts.



Indexable Drills

**■ KM32TS, KM40TS, and KM50TS Shanks • 3 x D • Metric**

KM32TS		KM40TS		KM50TS		D1			gage insert		
					mm	in	D1 max	L1		L4 max	L5
KM32TSDFR125R3M	KM40TSDFR125R3M	KM50TSDFR125R3M			12,50	.492	13,50	67,9	37,5	0,5	DFR0202..
KM32TSDFR130R3M	KM40TSDFR130R3M	KM50TSDFR130R3M			13,00	.512	14,00	69,4	39,0	0,5	DFR0202..
KM32TSDFR140R3M	KM40TSDFR140R3M	KM50TSDFR140R3M			14,00	.551	15,00	72,4	42,0	0,5	DFR0202..
KM32TSDFR150R3M	KM40TSDFR150R3M	KM50TSDFR150R3M			15,00	.591	16,00	75,4	45,0	0,5	DFR0202..
KM32TSDFR160R3M	KM40TSDFR160R3M	KM50TSDFR160R3M			16,00	.630	17,00	78,4	48,0	0,5	DFR0202..
KM32TSDFR170R3M	KM40TSDFR170R3M	KM50TSDFR170R3M			17,00	.669	18,00	82,4	51,0	0,6	DFR0302..
KM32TSDFR180R3M	KM40TSDFR180R3M	KM50TSDFR180R3M			18,00	.709	19,00	85,4	54,0	0,6	DFR0302..
KM32TSDFR190R3M	KM40TSDFR190R3M	KM50TSDFR190R3M			19,00	.748	20,00	89,4	57,0	0,6	DFR0302..
KM32TSDFR200R3M	KM40TSDFR200R3M	KM50TSDFR200R3M			20,00	.787	21,00	92,4	60,0	0,6	DFR0302..
KM32TSDFR210R3M	KM40TSDFR210R3M	KM50TSDFR210R3M			21,00	.827	22,00	96,6	63,0	0,8	DFR0403..
KM32TSDFR220R3M	KM40TSDFR220R3M	KM50TSDFR220R3M			22,00	.866	23,00	99,6	66,0	0,8	DFR0403..
KM32TSDFR230R3M	KM40TSDFR230R3M	KM50TSDFR230R3M			23,00	.906	24,00	103,6	69,0	0,8	DFR0403..
KM32TSDFR240R3M	KM40TSDFR240R3M	KM50TSDFR240R3M			24,00	.945	25,00	106,6	72,0	0,8	DFR0403..

**■ KM32TS, KM40TS, and KM50TS Shanks • 3 x D • Inch**

KM32TS		KM40TS		KM50TS		D1			gage insert		
					in	mm	D1 max	L1		L4 max	L5
KM32TSDFR0500R3	KM40TSDFR0500R3	KM50TSDFR0500R3			.500	12,70	.540	2,64	1,50	.02	DFR0202..
KM32TSDFR0531R3	KM40TSDFR0531R3	KM50TSDFR0531R3			.531	13,49	.571	2,76	1,59	.02	DFR0202..
KM32TSDFR0563R3	KM40TSDFR0563R3	KM50TSDFR0563R3			.563	14,30	.603	2,89	1,69	.02	DFR0202..
KM32TSDFR0594R3	KM40TSDFR0594R3	KM50TSDFR0594R3			.594	15,09	.634	3,01	1,78	.02	DFR0202..
KM32TSDFR0625R3	KM40TSDFR0625R3	KM50TSDFR0625R3			.625	15,88	.665	3,14	1,88	.02	DFR0202..
KM32TSDFR0656R3	KM40TSDFR0656R3	KM50TSDFR0656R3			.656	16,66	.696	3,27	1,97	.02	DFR0302..
KM32TSDFR0688R3	KM40TSDFR0688R3	KM50TSDFR0688R3			.688	17,48	.728	3,39	2,06	.02	DFR0302..
KM32TSDFR0734R3	KM40TSDFR0734R3	KM50TSDFR0734R3			.734	18,64	.774	3,52	2,20	.02	DFR0302..
KM32TSDFR0750R3	KM40TSDFR0750R3	KM50TSDFR0750R3			.750	19,05	.790	3,52	2,25	.02	DFR0302..
KM32TSDFR0781R3	KM40TSDFR0781R3	KM50TSDFR0781R3			.781	19,84	.821	3,64	2,34	.02	DFR0302..
KM32TSDFR0813R3	KM40TSDFR0813R3	KM50TSDFR0813R3			.813	20,65	.853	3,77	2,44	.03	DFR0403..
KM32TSDFR0844R3	KM40TSDFR0844R3	KM50TSDFR0844R3			.844	21,44	.884	3,90	2,53	.03	DFR0403..
KM32TSDFR0875R3	KM40TSDFR0875R3	KM50TSDFR0875R3			.875	22,23	.915	4,02	2,63	.03	DFR0403..
KM32TSDFR0906R3	KM40TSDFR0906R3	KM50TSDFR0906R3			.906	23,01	.946	4,15	2,72	.03	DFR0403..
KM32TSDFR0938R3	KM40TSDFR0938R3	KM50TSDFR0938R3			.938	23,83	.978	4,27	2,81	.03	DFR0403..
KM32TSDFR0969R3	KM40TSDFR0969R3	KM50TSDFR0969R3			.969	24,61	1,009	4,40	2,91	.03	DFR0403..

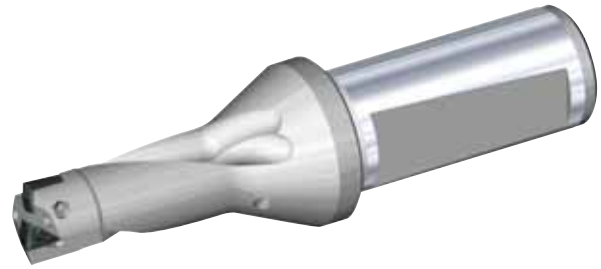
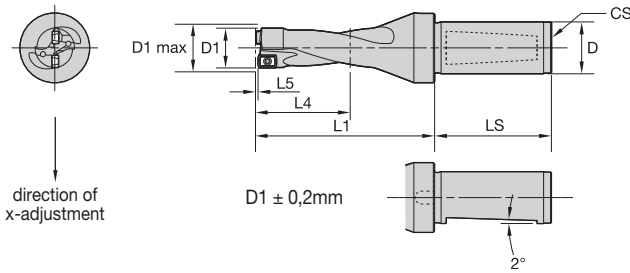
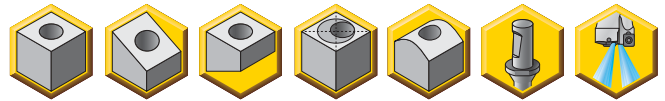
**WARNING**

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size
DFR0202..	193.281	170.027	T6
DFR0302..	192.416	170.023	T7
DFR0403..	192.432	170.025	T8



- Drill shipped with insert screws and Torx wrench.
- See page J95 for inserts.



■ WN/WD Shank • 2 x D • Metric

D		D1			gage insert		
20	32	mm	in	D1 max	L1	L4 max	L5
DFR125R2WD20M	—	12,50	.492	13,50	47,4	25,0	0,5
DFR127R2WD20M	—	12,70	.500	13,70	47,8	25,4	0,5
DFR130R2WD20M	—	13,00	.512	14,00	48,4	26,0	0,5
DFR135R2WD20M	—	13,50	.532	14,50	49,4	27,0	0,5
DFR140R2WD20M	—	14,00	.551	15,00	50,4	28,0	0,5
DFR145R2WD20M	—	14,50	.571	15,50	53,4	29,0	0,5
DFR150R2WD20M	—	15,00	.591	16,00	54,4	30,0	0,5
DFR155R2WD20M	—	15,50	.610	16,50	55,4	31,0	0,5
DFR160R2WD20M	—	16,00	.630	17,00	56,4	32,0	0,5
—	DFR165R2WD32M	16,50	.650	17,50	62,4	33,0	0,6
—	DFR170R2WD32M	17,00	.669	18,00	63,4	34,0	0,6
—	DFR175R2WD32M	17,50	.689	18,50	64,4	35,0	0,6
—	DFR180R2WD32M	18,00	.709	19,00	65,4	36,0	0,6
—	DFR185R2WD32M	18,50	.728	19,50	66,4	37,0	0,6
—	DFR190R2WD32M	19,00	.748	20,00	67,4	38,0	0,6
—	DFR195R2WD32M	19,50	.768	20,50	68,4	39,0	0,6
—	DFR200R2WD32M	20,00	.787	21,00	72,4	40,0	0,6
—	DFR205R2WD32M	20,50	.807	21,50	73,6	41,0	0,8
—	DFR210R2WD32M	21,00	.827	22,00	74,6	42,0	0,8
—	DFR220R2WD32M	22,00	.866	23,00	76,6	44,0	0,8
—	DFR230R2WD32M	23,00	.906	24,00	78,6	46,0	0,8
—	DFR240R2WD32M	24,00	.945	25,00	80,6	48,0	0,8

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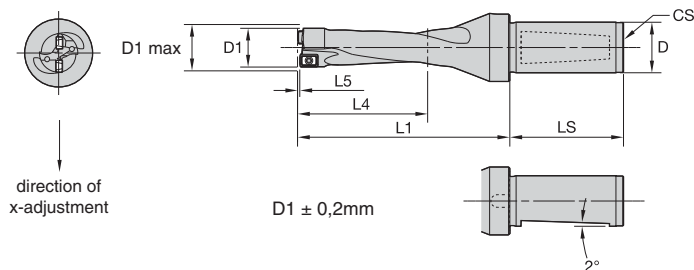
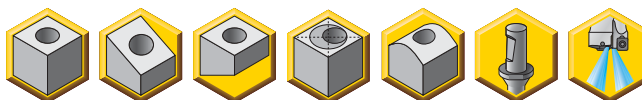
**WARNING**

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size
DFR0202..	193.281	170.027	6
DFR0302..	192.416	170.023	7
DFR0403..	192.432	170.028	8

D	LS	CS
20	45	R 1/8 BSP
32	58	R 1/4 BSP

- Drill shipped with insert screws and Torx wrench.
- See page J95 for inserts.



■ WN/WD Shank • 3 x D • Metric

Indexable Drills

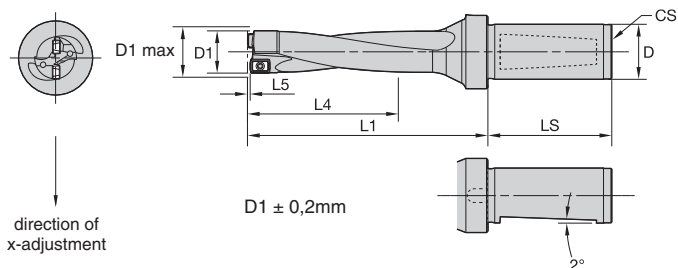
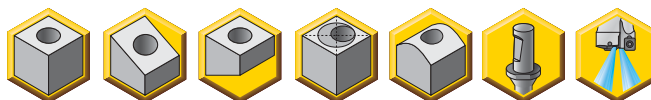
	D			D1		L1	L4 max	L5	gage insert	
	20	25	32	mm	in					
DFR125R3WD20M	—	—	—	12,50	.492	13,50	59,9	37,5	0,5	DFR0202..
DFR127R3WD20M	—	—	—	12,70	.500	13,70	60,5	38,1	0,5	DFR0202..
DFR130R3WD20M	—	—	—	13,00	.512	14,00	61,4	39,0	0,5	DFR0202..
DFR135R3WD20M	—	—	—	13,50	.532	14,50	62,9	40,5	0,5	DFR0202..
DFR140R3WD20M	—	—	—	14,00	.551	15,00	64,4	42,0	0,5	DFR0202..
DFR145R3WD20M	—	—	—	14,50	.571	15,50	67,9	43,5	0,5	DFR0202..
DFR150R3WD20M	—	—	—	15,00	.591	16,00	69,4	45,0	0,5	DFR0202..
DFR155R3WD20M	—	—	—	15,50	.610	16,50	70,9	46,5	0,5	DFR0202..
DFR160R3WD20M	—	—	—	16,00	.630	17,00	72,4	48,0	0,5	DFR0202..
—	—	—	DFR165R3WD32M	16,50	.650	17,50	78,9	49,5	0,6	DFR0302..
—	—	—	DFR170R3WD32M	17,00	.669	18,00	80,4	51,0	0,6	DFR0302..
—	DFR175R3WD25M	—	DFR175R3WD32M	17,50	.689	18,50	81,9	52,5	0,6	DFR0302..
—	DFR180R3WD25M	—	DFR180R3WD32M	18,00	.709	19,00	83,4	54,0	0,6	DFR0302..
—	DFR185R3WD25M	—	DFR185R3WD32M	18,50	.728	19,50	84,9	55,5	0,6	DFR0302..
—	DFR190R3WD25M	—	DFR190R3WD32M	19,00	.748	20,00	86,4	57,0	0,6	DFR0302..
—	DFR195R3WD25M	—	DFR195R3WD32M	19,50	.768	20,50	87,9	58,5	0,6	DFR0302..
—	DFR200R3WD25M	—	DFR200R3WD32M	20,00	.787	21,00	92,4	60,0	0,6	DFR0302..
—	DFR205R3WD25M	—	DFR205R3WD32M	20,50	.807	21,50	94,1	61,5	0,8	DFR0403..
—	DFR210R3WD25M	—	DFR210R3WD32M	21,00	.827	22,00	95,6	63,0	0,8	DFR0403..
—	DFR220R3WD25M	—	DFR220R3WD32M	22,00	.866	23,00	98,6	66,0	0,8	DFR0403..
—	DFR230R3WD25M	—	DFR230R3WD32M	23,00	.906	24,00	101,6	69,0	0,8	DFR0403..
—	DFR240R3WD25M	—	DFR240R3WD32M	24,00	.945	25,00	104,6	72,0	0,8	DFR0403..

**WARNING**

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size			
				D	LS	CS
DFR0202..	193.281	170.027	6	20	45	R 1/8 BSP
DFR0302..	192.416	170.023	7	25	45	R 1/4 BSP
DFR0403..	192.432	170.028	8	32	58	R 1/4 BSP

- Drill shipped with insert screws and Torx wrench.
- See page J95 for inserts.



■ WN/WD Shank • 4 x D • Metric

D		D1		D1 max	L1	L4 max	L5	gage insert
20	32	mm	in					
DFR125R4WD20M	—	12,50	.492	13,50	72,4	50,0	0,5	DFR0202..
DFR127R4WD20M	—	12,70	.500	13,70	73,2	50,8	0,5	DFR0202..
DFR130R4WD20M	—	13,00	.512	14,00	74,4	52,0	0,5	DFR0202..
DFR135R4WD20M	—	13,50	.532	14,50	76,4	54,0	0,5	DFR0202..
DFR140R4WD20M	—	14,00	.551	15,00	78,4	56,0	0,5	DFR0202..
DFR145R4WD20M	—	14,50	.571	15,50	82,4	58,0	0,5	DFR0202..
DFR150R4WD20M	—	15,00	.591	16,00	84,4	60,0	0,5	DFR0202..
DFR155R4WD20M	—	15,50	.610	16,50	86,4	62,0	0,5	DFR0202..
DFR160R4WD20M	—	16,00	.630	17,00	88,4	64,0	0,5	DFR0202..
—	DFR165R4WD32M	16,50	.650	17,50	95,4	66,0	0,6	DFR0302..
—	DFR170R4WD32M	17,00	.669	18,00	97,4	68,0	0,6	DFR0302..
—	DFR175R4WD32M	17,50	.689	18,50	99,4	70,0	0,6	DFR0302..
—	DFR180R4WD32M	18,00	.709	19,00	101,4	72,0	0,6	DFR0302..
—	DFR185R4WD32M	18,50	.728	19,50	103,4	74,0	0,6	DFR0302..
—	DFR190R4WD32M	19,00	.748	20,00	105,4	76,0	0,6	DFR0302..
—	DFR195R4WD32M	19,50	.768	20,50	107,4	78,0	0,6	DFR0302..
—	DFR200R4WD32M	20,00	.787	21,00	109,4	80,0	0,6	DFR0302..
—	DFR205R4WD32M	20,50	.807	21,50	111,6	82,0	0,8	DFR0403..
—	DFR210R4WD32M	21,00	.827	22,00	113,6	84,0	0,8	DFR0403..
—	DFR220R4WD32M	22,00	.866	23,00	117,6	88,0	0,8	DFR0403..
—	DFR230R4WD32M	23,00	.906	24,00	121,6	92,0	0,8	DFR0403..
—	DFR240R4WD32M	24,00	.945	25,00	125,6	96,0	0,8	DFR0403..

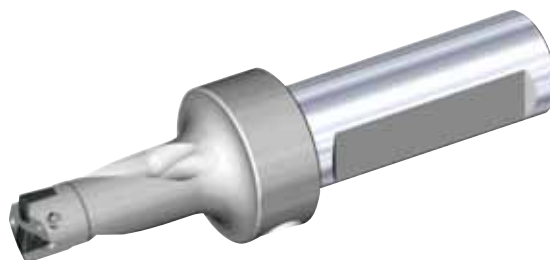
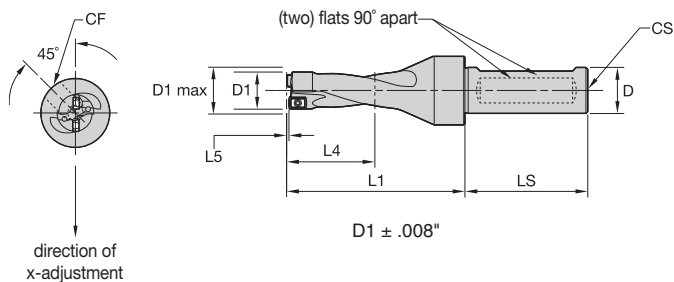
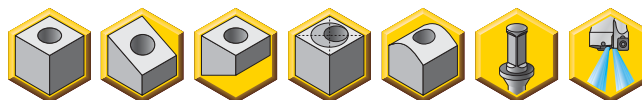
**WARNING**

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size
DFR0202..	193.281	170.027	6
DFR0302..	192.416	170.023	7
DFR0403..	192.432	170.028	8

D	LS	CS
20	45	R 1/8 BSP
32	58	R 1/4 BSP

- Drill shipped with insert screws, side pipe plug, and Torx wrench.
- See page J95 for inserts.



**■ Flange Shank • 2 x D • Inch**

Indexable Drills

	D		D1		D1 max	L1	L4 max	L5	gage insert
	0.750	1.000	in	mm					
DFR0500R2SSF075	—	—	.500	12,70	.539	1.95	1.00	.02	DFR0202..
DFR0563R2SSF075	—	—	.563	14,30	.602	2.08	1.13	.02	DFR0202..
DFR0625R2SSF075	—	—	.625	15,88	.664	2.20	1.25	.02	DFR0202..
DFR0688R2SSF075	—	—	.688	17,48	.727	2.33	1.38	.02	DFR0302..
—	—	DFR0750R2SSF100	.750	19,05	.789	2.52	1.50	.02	DFR0302..
—	—	DFR0813R2SSF100	.813	20,65	.852	2.65	1.63	.03	DFR0403..
—	—	DFR0875R2SSF100	.875	22,23	.914	2.87	1.75	.03	DFR0403..
—	—	DFR0938R2SSF100	.938	23,83	.977	2.99	1.88	.03	DFR0403..
—	—	DFR1000R2SSF100	1.000	25,40	1.039	3.12	2.00	.03	DFR0403..

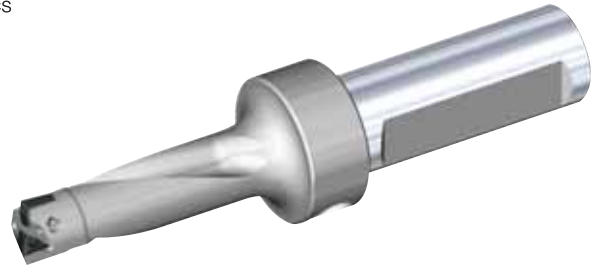
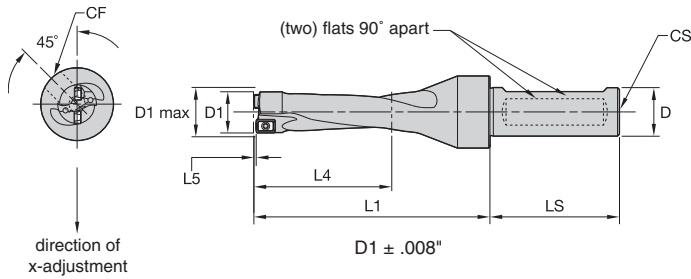
**WARNING**

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size
DFR0202..	193.281	170.027	6
DFR0302..	192.416	170.023	7
DFR0403..	192.432	170.028	8

D	LS	CF	CS	pipe plug
0.75	2.00	1/8-27 NPT	1/8-27 NPT	HSFS0125
1.00	3.00	1/8-27 NPT	1/4-18 NPT	HSFS0125

- Drill shipped with insert screws, side pipe plug, and Torx wrench.
- See page J95 for inserts.



### ■ Flange Shank • 3 x D • Inch

	D			D1					gage insert	
	0.750	1.000	1.250	in	mm	D1 max	L1	L4 max		L5
DFR0500R3SSF075	—	—	—	.500	12,70	.539	2.44	1.59	.02	DFR0202..
DFR0531R3SSF075	—	—	—	.531	13,49	.571	2.50	1.69	.02	DFR0202..
DFR0563R3SSF075	—	—	—	.563	14,30	.602	2.64	1.69	.02	DFR0202..
DFR0594R3SSF075	—	—	—	.594	15,09	.633	2.70	1.78	.02	DFR0202..
DFR0625R3SSF075	DFR0625R3SSF100	—	—	.625	15,88	.664	2.83	1.88	.02	DFR0202..
DFR0656R3SSF075	DFR0656R3SSF100	—	—	.656	16,66	.695	2.92	1.97	.02	DFR0302..
DFR0688R3SSF075	DFR0688R3SSF100	—	—	.688	17,48	.727	3.02	2.06	.02	DFR0302..
DFR0703R3SSF075	DFR0703R3SSF100	—	—	.703	17,86	.742	3.13	2.11	.02	DFR0302..
DFR0734R3SSF075	DFR0734R3SSF100	—	—	.734	18,64	.773	3.22	2.20	.02	DFR0302..
DFR0750R3SSF075	DFR0750R3SSF100	—	—	.750	19,05	.789	3.27	2.25	.02	DFR0302..
DFR0781R3SSF075	DFR0781R3SSF100	—	—	.781	19,84	.820	3.36	2.34	.02	DFR0302..
DFR0813R3SSF075	DFR0813R3SSF100	—	—	.813	20,65	.852	3.46	2.44	.03	DFR0403..
DFR0844R3SSF075	DFR0844R3SSF100	—	—	.844	21,44	.883	3.65	2.53	.03	DFR0403..
DFR0875R3SSF075	DFR0875R3SSF100	—	—	.875	22,23	.914	3.74	2.63	.03	DFR0403..
—	DFR0906R3SSF100	—	—	.906	23,01	.945	3.83	2.72	.03	DFR0403..
—	DFR0938R3SSF100	—	—	.938	23,83	.977	3.93	2.81	.03	DFR0403..
—	DFR0969R3SSF100	—	—	.969	24,61	1.008	4.02	2.91	.03	DFR0403..
—	DFR0984R3SSF100	—	—	.984	24,99	1.023	4.07	2.95	.03	DFR0403..
—	DFR1000R3SSF100	DFR1000R3SSF125	—	1.000	25,40	1.039	4.12	3.00	.03	DFR0403..

Indexable Drills

#### WARNING

During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece. When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force. Provide adequate shielding to protect bystanders.

gage insert	insert screw	Torx wrench	Torx size	D	LS	CF	CS	pipe plug
DFR0202..	193.281	170.027	6	0.75	2.00	1/8-27 NPT	1/8-27 NPT	HSFS0125
DFR0302..	192.416	170.023	7	1.00	3.00	1/8-27 NPT	1/4-18 NPT	HSFS0125
DFR0403..	192.432	170.028	8	1.25	3.25	1/8-27 NPT	1/4-18 NPT	HSFS0125