INCH

TOP CUT 4™

4-Edged Indexable Drill Capable of Drilling up to 5xD

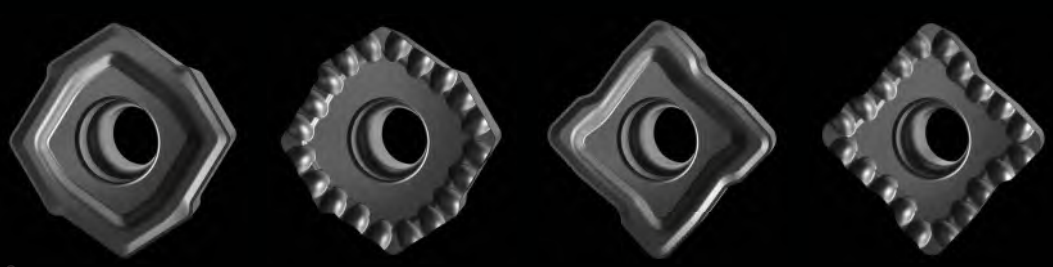
WM35PH Grade Now Available for Stainless Steels and High-Temp Alloys

WIDIA™

WM35PH is the latest grade for the Top Cut 4 platform of high-performance indexable drilling. With the smooth Hi-PIMS coating surface, these V36 and V38 inserts offer durability and repeatability with every cut.

THE SOLUTION FEATURES:

- ▽ Optimum layer adhesion prevents the coating from flaking and edge build-up
- ▽ Specialized grades increase tool life and ensure high process reliability in stainless steels and high-temp alloys
- ▽ V36 geometry provides stability and versatility in general-purpose machining
- ▽ V38 geometry excels in long-chipping materials



Industries

General Engineering

Automotive

Oil & Gas

Wind & Solar

Aerospace

Aerospace and Defense

Earthworks

Materials

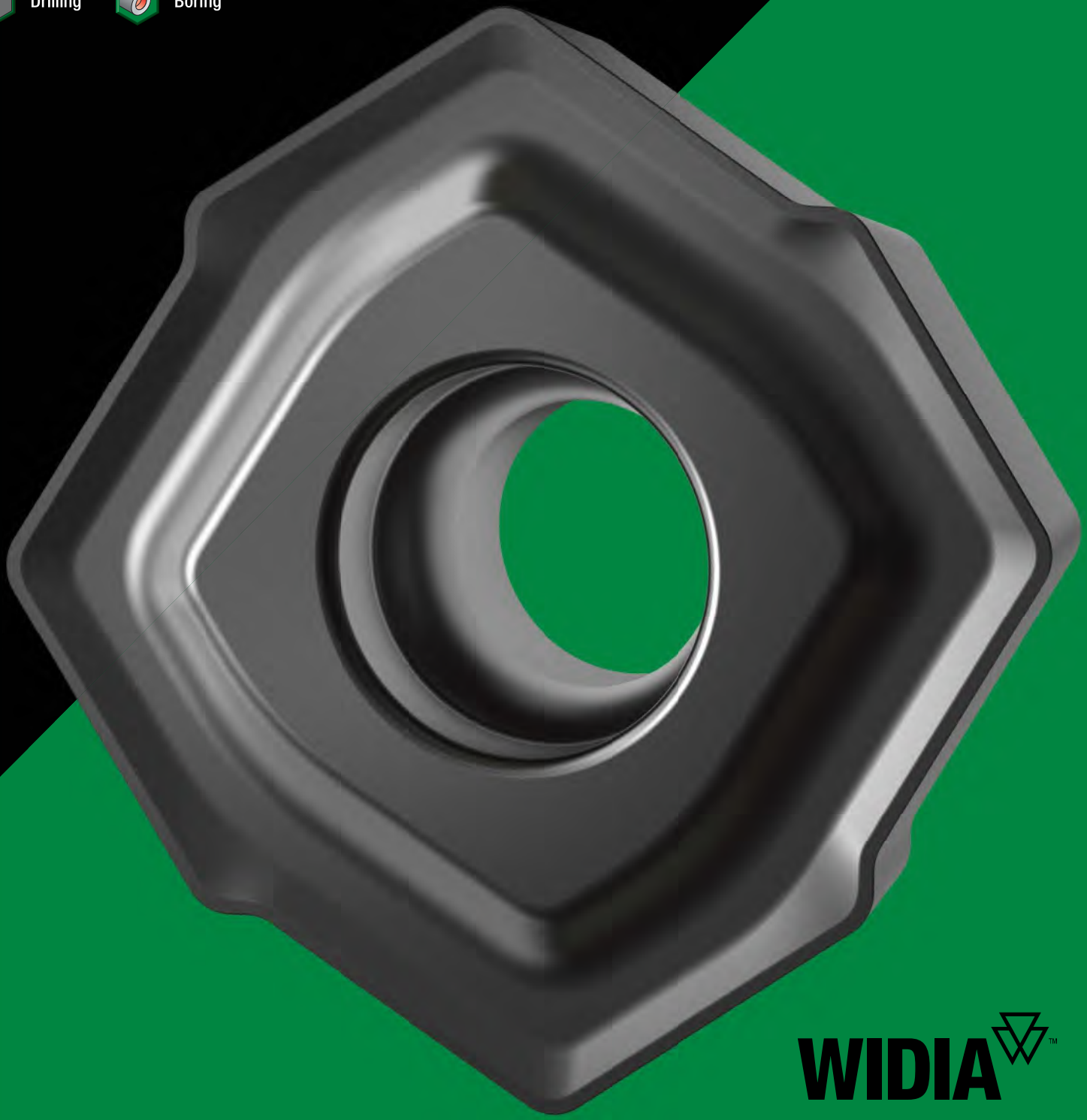
M Stainless Steels

S High-Temp Alloys

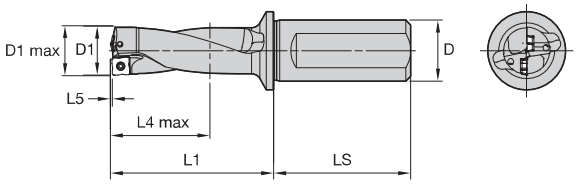
Applications

Drilling

Boring



WIDIA™



Top Cut 4

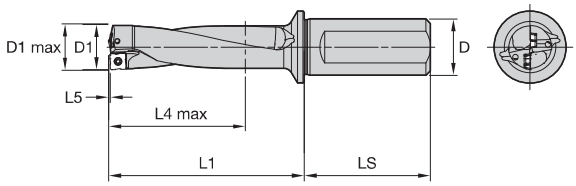
2xD • SLR Shanks

Order Number	Catalog Number	D1	D1 Max	D	L1	L4 Max	L5	LS	SSC	Periphery Insert	Center Insert
5537880	TCF0500R2SLR075A	.500	.520	.75	1.776	1.018	.018	1.969	A	TCF040204AP	TCF040203AC
5578228	TCF0625R2SLR075B	.625	.645	.75	2.118	1.273	.023	1.969	B	TCF050204BP	TCF060203BC
5578379	TCF0750R2SLR100C	.750	.770	1.00	2.510	1.527	.027	2.205	C	TCF070306CP	TCF070304CC
5578403	TCF0875R2SLR100C	.875	.895	1.00	2.901	1.781	.031	2.205	C	TCF070306CP	TCF070304CC
5537847	TCF1000R2SLR100D	1.000	1.039	1.00	3.194	2.036	.036	2.205	D	TCF080308DP	TCF090305DC
5537911	TCF1125R2SLR125D	1.125	1.164	1.25	3.612	2.290	.040	2.362	D	TCF080308DP	TCF090305DC
5537968	TCF1250R2SLR125E	1.250	1.289	1.25	3.867	2.545	.045	2.362	E	TCF100408EP	TCF120405EC
5538061	TCF1375R2SLR125E	1.375	1.414	1.25	4.233	2.799	.049	2.362	E	TCF100408EP	TCF120405EC
5578652	TCF1500R2SLR150F	1.500	1.539	1.50	4.641	3.055	.055	2.756	F	TCF120412FP	TCF150406FC
5578655	TCF1625R2SLR150F	1.625	1.664	1.50	5.007	3.308	.058	2.756	F	TCF120412FP	TCF150406FC
5578658	TCF1750R2SLR150F	1.750	1.789	1.50	5.373	3.562	.062	2.756	F	TCF120412FP	TCF150406FC
5578766	TCF1875R2SLR150G	1.875	1.914	1.50	5.554	3.818	.068	2.756	G	TCF150512GP	TCF180508GC
5578768	TCF2000R2SLR150G	2.000	2.039	1.50	5.907	4.071	.071	2.756	G	TCF150512GP	TCF180508GC
5578769	TCF2125R2SLR150G	2.125	2.164	1.50	6.261	4.324	.075	2.756	G	TCF150512GP	TCF180508GC
5538500	TCF2250R2SLR150H	2.250	2.289	1.50	6.392	4.581	.081	2.756	H	TCF180614HP	TCF210608HC
5538501	TCF2375R2SLR150H	2.375	2.414	1.50	6.734	4.835	.085	2.756	H	TCF180614HP	TCF210608HC
5538502	TCF2500R2SLR150H	2.500	2.539	1.50	7.074	5.088	.088	2.756	H	TCF180614HP	TCF210608HC

D	LS	
	mm	in
.75	50	1.9685
1.00	56	2.2047
1.25	60	2.3622
1.50	70	2.7559

NOTE: Drilling in stacked plates possible in certain applications. Ask for technical support.
Drill shipped with insert screws and Torx wrench.
SSC = Pocket Seat Reference.
SLR = Side Lock.
D1 max is an achievable diameter using x-offset.

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.



Top Cut 4

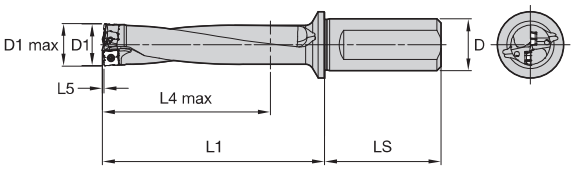
3xD • SLR Shanks

Order Number	Catalog Number	D1	D1 Max	D	L1	L4 Max	L5	LS	SSC	Periphery Insert	Center Insert
5537882	TCF0473R3SLR075A	.473	.493	.75	2.161	1.436	.017	1.969	A	TCF040204AP	TCF040203AC
5537883	TCF0500R3SLR075A	.500	.520	.75	2.276	1.518	.018	1.969	A	TCF040204AP	TCF040203AC
5537884	TCF0531R3SLR075A	.531	.551	.75	2.407	1.612	.019	1.969	A	TCF040204AP	TCF040203AC
5578304	TCF0563R3SLR075B	.563	.583	.75	2.486	1.709	.020	1.969	B	TCF050204BP	TCF060203BC
5578305	TCF0594R3SLR075B	.594	.614	.75	2.615	1.804	.022	1.969	B	TCF050204BP	TCF060203BC
5578306	TCF0625R3SLR075B	.625	.645	.75	2.743	1.898	.023	1.969	B	TCF050204BP	TCF060203BC
5578307	TCF0656R3SLR075B	.656	.676	.75	2.871	1.992	.024	1.969	B	TCF050204BP	TCF060203BC
5578308	TCF0688R3SLR075B	.688	.708	.75	3.003	2.089	.025	1.969	B	TCF050204BP	TCF060203BC
5578309	TCF0703R3SLR075B	.703	.723	.75	3.065	2.134	.025	1.969	B	TCF050204BP	TCF060203BC
5578310	TCF0719R3SLR075B	.719	.739	.75	3.131	2.182	.026	1.969	B	TCF050204BP	TCF060203BC
5578311	TCF0734R3SLR075B	.734	.754	.75	3.193	2.228	.026	1.969	B	TCF050204BP	TCF060203BC
5578406	TCF0750R3SLR100C	.750	.770	1.00	3.260	2.277	.027	2.205	C	TCF070306CP	TCF070304CC
5578407	TCF0781R3SLR100C	.781	.801	1.00	3.388	2.371	.028	2.205	C	TCF070306CP	TCF070304CC
5578408	TCF0813R3SLR100C	.813	.833	1.00	3.520	2.468	.029	2.205	C	TCF070306CP	TCF070304CC
5578409	TCF0844R3SLR100C	.844	.864	1.00	3.648	2.562	.030	2.205	C	TCF070306CP	TCF070304CC
5578410	TCF0875R3SLR100C	.875	.895	1.00	3.776	2.656	.031	2.205	C	TCF070306CP	TCF070304CC
5578411	TCF0906R3SLR100C	.906	.926	1.00	3.904	2.750	.032	2.205	C	TCF070306CP	TCF070304CC
5578412	TCF0938R3SLR100C	.938	.958	1.00	4.035	2.846	.032	2.205	C	TCF070306CP	TCF070304CC
5537913	TCF0969R3SLR100D	.969	1.008	1.00	4.069	2.942	.035	2.205	D	TCF080308DP	TCF090305DC
5537914	TCF0984R3SLR100D	.984	1.023	1.00	4.130	2.988	.036	2.205	D	TCF080308DP	TCF090305DC
5537915	TCF1000R3SLR100D	1.000	1.039	1.00	4.194	3.036	.036	2.205	D	TCF080308DP	TCF090305DC
5537916	TCF1031R3SLR125D	1.031	1.070	1.25	4.358	3.130	.037	2.362	D	TCF080308DP	TCF090305DC
5537917	TCF1063R3SLR125D	1.063	1.102	1.25	4.487	3.227	.038	2.362	D	TCF080308DP	TCF090305DC
5537918	TCF1094R3SLR125D	1.094	1.133	1.25	4.612	3.321	.039	2.362	D	TCF080308DP	TCF090305DC
5537919	TCF1125R3SLR125D	1.125	1.164	1.25	4.737	3.415	.040	2.362	D	TCF080308DP	TCF090305DC
5537920	TCF1156R3SLR125D	1.156	1.195	1.25	4.862	3.509	.041	2.362	D	TCF080308DP	TCF090305DC
5538064	TCF1188R3SLR125E	1.188	1.227	1.25	4.873	3.607	.043	2.362	E	TCF100408EP	TCF120405EC
5538065	TCF1210R3SLR125E	1.210	1.249	1.25	4.960	3.674	.044	2.362	E	TCF100408EP	TCF120405EC
5538066	TCF1219R3SLR125E	1.219	1.258	1.25	4.995	3.701	.044	2.362	E	TCF100408EP	TCF120405EC
5538067	TCF1250R3SLR125E	1.250	1.289	1.25	5.117	3.795	.045	2.362	E	TCF100408EP	TCF120405EC
5538068	TCF1280R3SLR125E	1.281	1.320	1.25	5.239	3.889	.046	2.362	E	TCF100408EP	TCF120405EC
5538069	TCF1313R3SLR125E	1.313	1.352	1.25	5.365	3.986	.047	2.362	E	TCF100408EP	TCF120405EC
5538080	TCF1375R3SLR125E	1.375	1.414	1.25	5.608	4.174	.049	2.362	E	TCF100408EP	TCF120405EC
5538081	TCF1406R3SLR150E	1.406	1.445	1.50	5.770	4.268	.050	2.756	E	TCF100408EP	TCF120405EC
5538082	TCF1438R3SLR150E	1.438	1.477	1.50	5.895	4.364	.050	2.756	E	TCF100408EP	TCF120405EC
5578659	TCF1469R3SLR150F	1.469	1.508	1.50	6.019	4.460	.054	2.756	F	TCF120412FP	TCF150406FC
5578670	TCF1500R3SLR150F	1.500	1.539	1.50	6.141	4.555	.055	2.756	F	TCF120412FP	TCF150406FC
5578671	TCF1531R3SLR150F	1.531	1.570	1.50	6.263	4.649	.056	2.756	F	TCF120412FP	TCF150406FC
5578672	TCF1563R3SLR150F	1.563	1.602	1.50	6.389	4.746	.057	2.756	F	TCF120412FP	TCF150406FC
5578673	TCF1625R3SLR150F	1.625	1.664	1.50	6.632	4.933	.058	2.756	F	TCF120412FP	TCF150406FC
5578674	TCF1656R3SLR150F	1.656	1.695	1.50	6.754	5.027	.059	2.756	F	TCF120412FP	TCF150406FC
5578675	TCF1688R3SLR150F	1.688	1.727	1.50	6.880	5.124	.060	2.756	F	TCF120412FP	TCF150406FC
5578676	TCF1750R3SLR150F	1.750	1.789	1.50	7.123	5.312	.062	2.756	F	TCF120412FP	TCF150406FC
5578791	TCF1813R3SLR150G	1.813	1.852	1.50	7.192	5.505	.066	2.756	G	TCF150512GP	TCF180508GC
5578792	TCF1875R3SLR150G	1.875	1.914	1.50	7.429	5.693	.068	2.756	G	TCF150512GP	TCF180508GC
5578793	TCF1938R3SLR150G	1.938	1.977	1.50	7.670	5.883	.069	2.756	G	TCF150512GP	TCF180508GC
5578794	TCF2000R3SLR150G	2.000	2.039	1.50	7.832	6.071	.071	2.756	G	TCF150512GP	TCF180508GC
5578795	TCF2125R3SLR150G	2.125	2.164	1.50	8.307	6.450	.075	2.756	G	TCF150512GP	TCF180508GC
5578796	TCF2219R3SLR150G	2.219	2.258	1.50	8.665	6.734	.077	2.756	G	TCF150512GP	TCF180508GC
5538503	TCF2250R3SLR150H	2.250	2.289	1.50	8.642	6.831	.081	2.756	H	TCF180614HP	TCF210608HC
5538504	TCF2375R3SLR150H	2.375	2.414	1.50	9.109	7.210	.085	2.756	H	TCF180614HP	TCF210608HC
5538505	TCF2500R3SLR150H	2.500	2.539	1.50	9.574	7.588	.088	2.756	H	TCF180614HP	TCF210608HC

D	LS	
	mm	in
.75	50	1.9685
1.00	56	2.2047
1.25	60	2.3622
1.50	70	2.7559

NOTE: Drilling in stacked plates possible in certain applications. Ask for technical support.
Drill shipped with insert screws and Torx wrench.
SSC = Pocket Seat Reference.
SLR = Side Lock.
D1 max is an achievable diameter using x-offset.

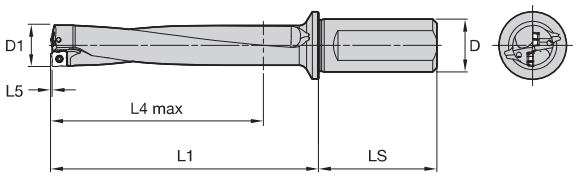
WARNING
During through-hole operations, a slug or disc is produced as the tool breaks through the workpiece.
When the drill is stationary and the workpiece is rotating, this slug may be hurled from the chuck by centrifugal force.
Provide adequate shielding to protect bystanders.



Top Cut 4

4xD • SLR Shanks

Order Number	Catalog Number	D1	D1 Max	D	L1	L4 Max	L5	LS	SSC	Periphery Insert	Center Insert
5578418	TCF0906R4SLR100C	.906	.926	1.00	4.810	3.656	.032	2.205	C	TCF070306CP	TCF070304CC



Top Cut 4

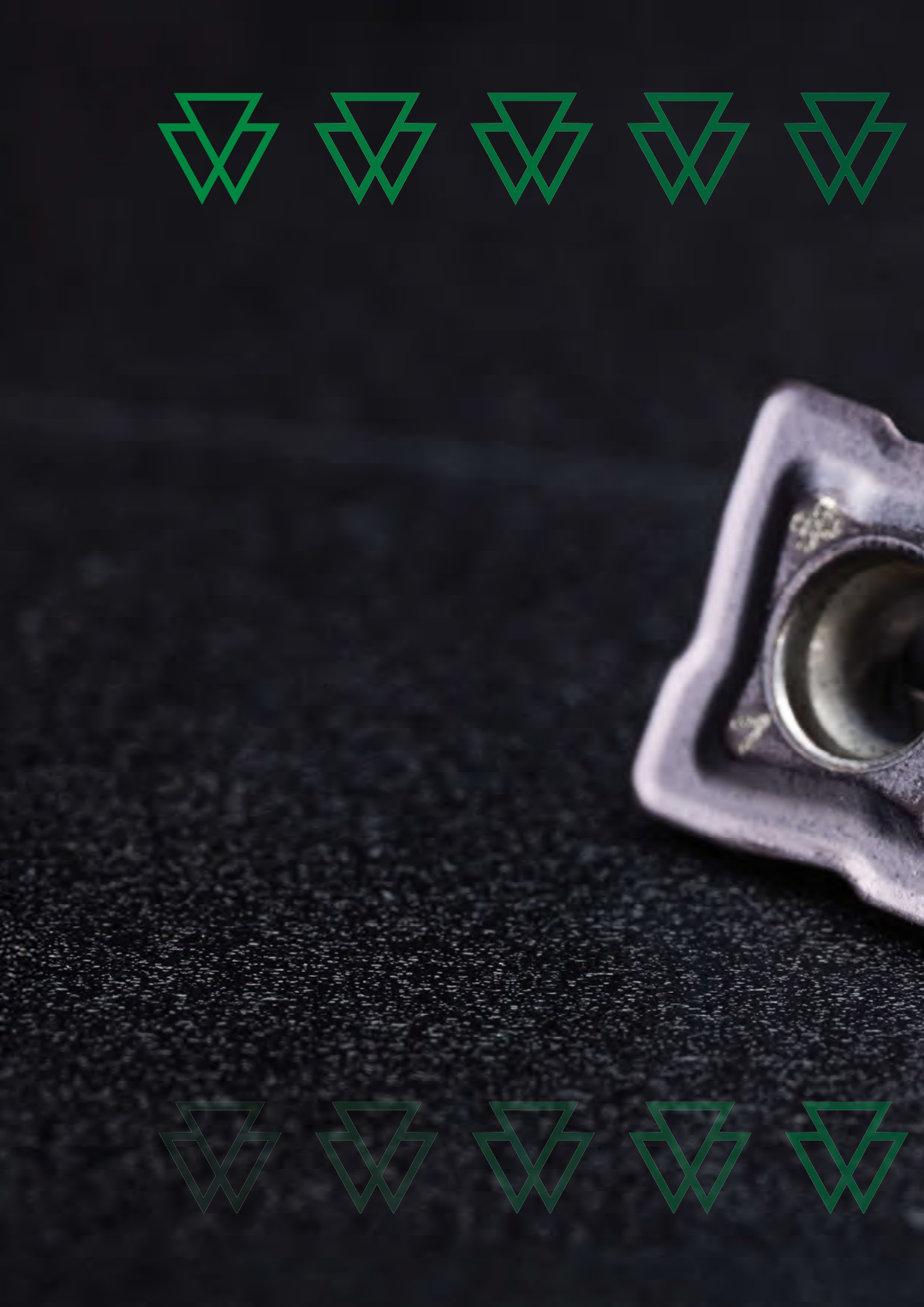
5xD • SLR Shanks

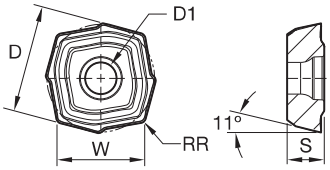
Order Number	Catalog Number	D1	D	L1	L4 Max	L5	LS	SSC	Periphery Insert	Center Insert
5578425	TCF0906R5SLR100C	.906	1.00	5.716	4.562	.032	2.205	C	TCF070306CP	TCF070304CC

D	LS	
	mm	in
.75	50	1.9685
1.00	56	2.2047
1.25	60	2.3622
1.50	70	2.7559

NOTE: Drilling in stacked plates possible in certain applications. Ask for technical support.
Drill shipped with insert screws and Torx wrench.
SSC = Pocket Seat Reference.
SLR = Side Lock.
D1 max is an achievable diameter using x-offset.

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.





● Primary
○ Secondary

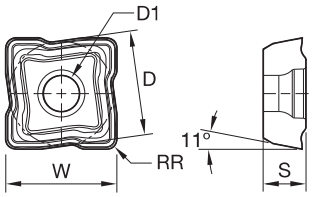
P	○	●
M	○	○
K	○	●
N		
S		
H		

Top Cut 4

Center Inserts • Roughing V34

Catalog Number	D	D1	W	S	RR	SSC	WU25CH	WU40PH
TCF040203ACV34	.176	.083	.144	.079	.011	A	5541817	5541818
TCF060203BCV34	.236	.094	.193	.095	.011	B	5542602	5542604
TCF070304CCV34	.299	.102	.244	.110	.015	C	5542642	5542643
TCF090305DCV34	.376	.110	.307	.118	.019	D	5538554	5538555
TCF120405ECV34	.473	.134	.386	.142	.019	E	5538603	5538604
TCF150406FCV34	.588	.189	.480	.165	.023	F	5542623	5542624
TCF180508GCV34	.704	.236	.575	.213	.031	G	5542475	5542476
TCF210608HCV34	.853	.295	.697	.256	.031	H	5542002	5542003

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



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

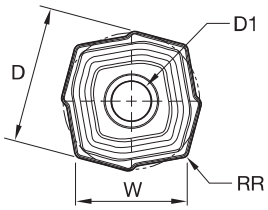
● Primary
○ Secondary

Top Cut 4

Periphery Inserts • Roughing V34

Catalog Number	D	D1	W	S	RR	SSC	WPK10CH	WU25CH	WU40PH
TCF040204APV34	.163	.083	.173	.079	.015	A	5541843	5541841	5541842
TCF050204BPV34	.200	.094	.213	.094	.015	B	5542620	5542608	5542609
TCF070306CPV34	.263	.102	.280	.110	.023	C	5542648	5542646	5542647
TCF080308DPV34	.318	.110	.339	.118	.031	D	5538600	5538558	5538559
TCF100408EPV34	.392	.134	.417	.142	.031	E	5538610	5538608	5538609
TCF120412FPV34	.496	.189	.528	.165	.046	F	5542629	5542627	5542628
TCF150512GPV34	.596	.236	.634	.213	.046	G	5542601	5542479	5542600
TCF180614HPV34	.710	.295	.756	.256	.054	H	5542008	5542006	5542007

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



● Primary
○ Secondary

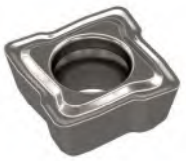
P M K N S H

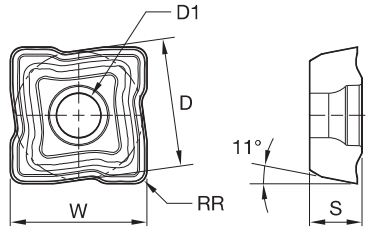
Top Cut 4

Center Inserts • Aluminum V36

Catalog Number	D	D1	W	S	RR	SSC	WN10PH
TCF040203ACV36	.176	.083	.083	.079	.011	A	6407887
TCF060203BCV36	.236	.094	.094	.095	.011	B	6372041
TCF070304CCV36	.299	.102	.102	.110	.015	C	6372042
TCF090305DCV36	.376	.110	.110	.118	.019	D	6372045
TCF120405ECV36	.473	.134	.134	.142	.019	E	6372047
TCF150406FCV36	.588	.189	.189	.165	.023	F	6346757
TCF180508GCV36	.704	.236	.236	.213	.031	G	6407890
TCF210608HCV36	.853	.295	.295	.256	.031	H	6372049

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.





● Primary
○ Secondary

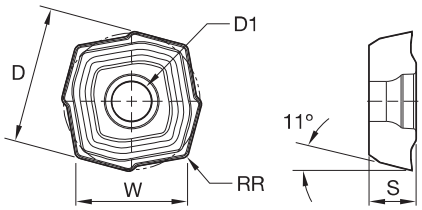
P
M
K
N ●
S
H

Top Cut 4

Periphery Inserts • Aluminum V36

Catalog Number	D	D1	W	S	RR	SSC	WN10PH
TCF040204APV36	.163	.083	.173	.079	.015	A	6407888
TCF050204BPV36	.200	.094	.213	.094	.015	B	6371850
TCF070306CPV36	.263	.102	.280	.110	.023	C	6372043
TCF080308DPV36	.318	.110	.339	.118	.031	D	6372044
TCF100408EPV36	.392	.134	.417	.142	.031	E	6372046
TCF120412FPV36	.496	.189	.528	.165	.046	F	6348893
TCF150512GPV36	.596	.236	.634	.213	.046	G	6407889
TCF180614HPV36	.710	.295	.756	.256	.054	H	6372048

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



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

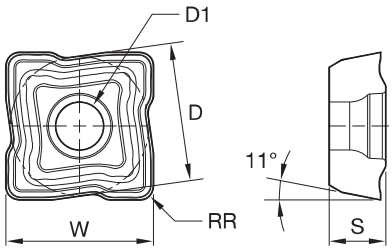
● Primary
○ Secondary

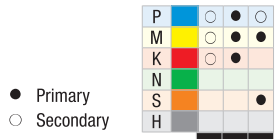
Top Cut 4

Center Inserts • Roughing V36

Catalog Number	D	D1	W	S	RR	SSC	WU25CH	WU40PH	WM35PH
TCF040203ACV36	.176	.083	.144	.079	.011	A	5541819	5541840	7301397
TCF060203BCV36	.236	.094	.193	.095	.011	B	5542606	5542607	7301398
TCF070304CCV36	.299	.102	.244	.110	.015	C	5542644	5542645	7301399
TCF090305DCV36	.376	.110	.307	.118	.019	D	5538556	5538557	7301400
TCF120405ECV36	.473	.134	.386	.142	.019	E	5538606	5538607	7301421
TCF150406FCV36	.588	.189	.480	.165	.023	F	5542625	5542626	7301422
TCF180508GCV36	.704	.236	.575	.213	.031	G	5542477	5542478	7301423
TCF210608HCV36	.853	.295	.697	.256	.031	H	5542004	5542005	7301424

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



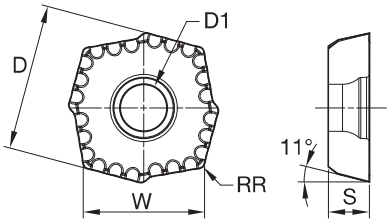


Top Cut 4

Periphery Inserts • Roughing V36

Catalog Number	D	D1	W	S	RR	SSC	WU25CH	WU40PH	WM35PH
TCF040204APV36	.163	.083	.173	.079	.015	A	5541844	5541845	7301433
TCF050204BPV36	.200	.094	.213	.094	.015	B	5542621	5542622	7301435
TCF070306CPV36	.263	.102	.280	.110	.023	C	5542649	5542650	7301436
TCF080308DPV36	.318	.110	.339	.118	.031	D	5538601	5538602	7301437
TCF100408EPV36	.392	.134	.417	.142	.031	E	5538611	5538612	7301438
TCF120412FPV36	.496	.189	.528	.165	.046	F	5542640	5542641	7301439
TCF150512GPV36	.596	.236	.634	.213	.046	G	5542603	5542605	7301440
TCF180614HPV36	.710	.295	.756	.256	.054	H	5542009	5542020	7301441

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



P	●	○
M	●	●
K		
N		
S		●
H		

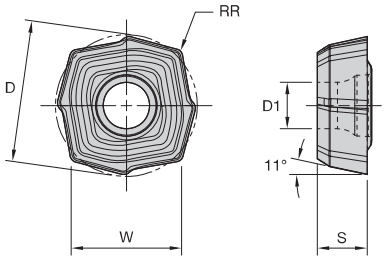
● Primary
○ Secondary

Top Cut 4

Center Inserts • Long Chip Materials V38

Catalog Number	D	D1	W	S	RR	SSC	WU40PH	WM35PH
TCF040203ACV38	.176	.083	.144	.079	.012	A	6429458	7301425
TCF060203BCV38	.236	.094	.193	.095	.012	B	6429459	7301426
TCF070304CCV38	.299	.102	.244	.110	.015	C	6429460	7301427
TCF090305DCV38	.376	.110	.307	.118	.019	D	6429461	7301428
TCF120405ECV38	.473	.134	.386	.142	.019	E	6429462	7301429
TCF150406FCV38	.588	.189	.480	.165	.023	F	6429463	7301430
TCF180508GCV38	.704	.236	.575	.213	.031	G	6324383	7301431
TCF210608HCV38	.853	.295	.697	.256	.031	H	6429464	7301432

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



P	●
M	●
K	●
N	
S	
H	

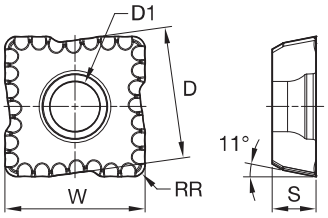
● Primary
○ Secondary

Top Cut 4

Center Inserts • Universal DU

Catalog Number	D	D1	W	S	RR	SSC	WU20PH
TCF070304CCDU	.299	.102	.244	.110	.015	C	6858590
TCF090305DCDU	.376	.110	.307	.118	.019	D	6858611
TCF120405ECDU	.473	.134	.386	.142	.019	E	6858612
TCF150406FCDU	.588	.189	.480	.165	.023	F	6858613

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



● Primary
○ Secondary

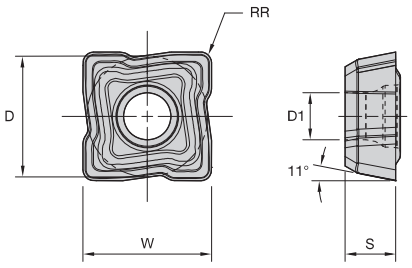
P	●	●	○
M	●	●	●
K	○	○	
N			
S			●
H			

Top Cut 4

Periphery Inserts • Long Chip Materials V38

Catalog Number	D	D1	W	S	RR	SSC	WU25CH	WU40PH	WM35PH
TCF040204APV38	.163	.083	.173	.079	.015	A	6429424	6429425	7301442
TCF050204BPV38	.200	.094	.213	.094	.015	B	6429426	6429427	7301443
TCF070306CPV38	.263	.102	.280	.110	.023	C	6429466	6429428	7301444
TCF080308DPV38	.318	.110	.339	.118	.031	D	6429429	6429430	7301445
TCF100408EPV38	.392	.134	.417	.142	.031	E	6429451	6429452	7301446
TCF120412FPV38	.496	.189	.528	.165	.046	F	6429453	6429454	7301447
TCF150512GPV38	.596	.236	.634	.213	.046	G	6429455	6324381	7301448
TCF180614HPV38	.710	.295	.756	.256	.054	H	6429456	6429457	7301450

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.



● Primary
○ Secondary

P	●	
M	●	
K	●	
N		
S		
H		

Top Cut 4

Periphery Inserts • Universal DU

Catalog Number	D	D1	W	S	RR	SSC	WU20PH
TCF070306CPDU	.263	.102	.280	.110	.023	C	6858586
TCF080308DPDU	.318	.110	.339	.118	.031	D	6858587
TCF100408EPDU	.392	.134	.417	.142	.031	E	6858588
TCF120412FPDU	.496	.189	.528	.165	.046	F	6858589

NOTE: For application-specific insert selection, please refer to the application data on page(s) 18-20.
SSC = Pocket Seat Reference. To correspond with the SSC on the toolholder.

Top Cut 4 • Insert Selection Guide

Material Group	Geometry	Light Machining		General Purpose		Heavy Machining	
		periphery insert	center insert	periphery insert	center insert	periphery insert	center insert
P1	V38/DU	WU25CH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH
P2–P4	V34/DU	WPK10CH	WU40PH/WU20PH	WU25CH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH
P5–P6	V36/DU	WU25CH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH
M1–M3	V36/DU	WM35PH/WU25CH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH
K1–K3	V34/DU	WPK10CH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH	WU40PH/WU20PH
N1–N4	V36	WN10PH	WN10PH	WN10PH	WN10PH	WN10PH	WN10PH
S1–S4	V38/DU	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH	WM35PH/WU40PH/WU20PH

NOTE: All speed conditions are for stable conditions. For unstable conditions, it is suggested to reduce starting speeds by 10%. For interrupted cuts, reduce speed by 20%.
For 4 x D, it is highly recommended to start with feed and speed values reduced by 10% less than above data.
For 5 x D, diameter range .473–.938" (insert sizes A to C), it is highly recommended to start with feed and speed values reduced by 20% less than above data.
For 5 x D, diameter range .969–2.5" (inserts sizes D to H), it is highly recommended to start with feed and speed values reduced by 15% less than above data.
For 4 x D and 5 x D, it is recommended to reduce feed rate during entry and exit by 30–50%.

Top Cut 4 • Drill Depth • X-Offset Capabilities • Hole Tolerance

Insert size	Diameter -Range inch	2 x D and 3 x D			4 x D			5 x D		
		X-offset value max. in inch	D1 max value inch	Hole tolerance inch	X-offset value max. in inch	D1 max value inch	Hole tolerance inch	X-offset value max. in inch	D1 max value inch	Hole tolerance inch
A	.473-.531	0.020	D1 + 0.039"	+/- 0.008	0.020	D1 + 0.039"	+/- 0.014	—	—	+/- 0.014
B	.563-.734	0.020	D1 + 0.039"	+/- 0.008	0.020	D1 + 0.039"	+/- 0.014	—	—	+/- 0.014
C	.750-.938	0.020	D1 + 0.039"	+/- 0.008	0.020	D1 + 0.039"	+/- 0.014	—	—	+/- 0.014
D	.969-1.156	0.031	D1 + 0.063"	+/- 0.008	0.031	D1 + 0.039"	+/- 0.014	—	—	+/- 0.014
E	1.188-1.438	0.031	D1 + 0.063"	+/- 0.008	0.031	D1 + 0.039"	+/- 0.014	—	—	+/- 0.014
F	1.469-1.750	0.031	D1 + 0.063"	+/- 0.010	0.031	D1 + 0.039"	+/- 0.015	—	—	+/- 0.015
G	1.813-2.219	0.039	D1 + 0.063"	+/- 0.010	0.031	D1 + 0.039"	+/- 0.015	—	—	+/- 0.015
H	2.250-2.500	0.039	D1 + 0.063"	+/- 0.011	0.031	D1 + 0.039"	+/- 0.017	—	—	+/- 0.017

NOTE: All speed conditions are for stable conditions. For unstable conditions, it is suggested to reduce starting speeds by 10%. For interrupted cuts, reduce speed by 20%.
For 4 x D, it is highly recommended to start with feed and speed values reduced by 10% less than above data.
For 5 x D, diameter range .473–.938" (insert sizes A to C), it is highly recommended to start with feed and speed values reduced by 20% less than above data.
For 5 x D, diameter range .969–2.5" (inserts sizes D to H), it is highly recommended to start with feed and speed values reduced by 15% less than above data.
For 4 x D and 5 x D, it is recommended to reduce feed rate during entry and exit by 30–50%.

Top Cut 4 • Screw Torque

SSC	Periphery Insert	Center Insert	Torx Size	Tightening Torque ft. lbs
A	TCF040204AP	TCF040203AC	T5	.295
B	TCF050204BP	TCF060203BC	T6	.390
C	TCF070306CP	TCF070304CC	T7	.663
D	TCF080308DP	TCF090305DC	T8	.811
E	TCF100408EP	TCF120405EC	T9	1.475
F	TCF120412FP	TCF150406FC	T15	2.950
G	TCF150512GP	TCF180508GC	T20	4.646
H	TCF180614HP	TCF210608HC	T25	6.490

Top Cut 4 • Cutting Data • Inch

TOP CUT 4 INCH								Recommended Feed Rate by Diameter (2 & 3 L/D)															
Material Group	Material Sub-group	Geometry	Grade		Cutting Speed - V_c			Inboard Insert Outboard Insert Ø (mm)	TCF040203AC TCF040204AP 12.00–13.99mm			TCF060203BC TCF050204BP 14.00–18.99mm			TCF070304CC TCF070306CP 19.00–23.99mm			TCF090305DC TCF080308DP 24.00–29.99mm		
					Range - SFM																		
			Center	Periphery	min	**Starting Value**	max	Feed - f_z in/rev	min	**Starting Value**	max	min	**Starting Value**	max	min	**Starting Value**	max	min	**Starting Value**	max
P	0	V38	WM35PH	WM35PH	919	**1001**	1066	in/rev	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.005	0.002	**0.004**	0.006
P	1	V34	WU40PH	WPK10CH	919	**1001**	1066	in/rev	0.002	**0.004**	0.006	0.003	**0.004**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
P	2	V34	WU40PH	WPK10CH	919	**1001**	1066	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
P	3	V34	WU40PH	WPK10CH	771	**869**	951	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
P	4	V34	WU40PH	WPK10CH	656	**771**	886	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
P	5	V36	WU40PH	WU25CH	525	**591**	656	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
P	6	V36	WU40PH	WU25CH	525	**591**	656	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.009
M	1	V36	WM35PH	WM35PH	394	**541**	689	in/rev	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.005	0.002	**0.004**	0.006
M	2	V36	WM35PH	WM35PH	361	**492**	623	in/rev	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.005	0.002	**0.004**	0.006
M	3	V36	WM35PH	WM35PH	295	**427**	558	in/rev	0.002	**0.003**	0.003	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.005
K	1	V34	WU40PH	WPK10CH	591	**738**	886	in/rev	0.003	**0.004**	0.006	0.003	**0.005**	0.007	0.003	**0.007**	0.009	0.003	**0.024**	0.043
K	2	V34	WU40PH	WPK10CH	525	**656**	771	in/rev	0.003	**0.004**	0.006	0.003	**0.005**	0.007	0.003	**0.007**	0.009	0.003	**0.007**	0.010
K	3	V34	WU40PH	WPK10CH	525	**656**	771	in/rev	0.003	**0.004**	0.006	0.003	**0.005**	0.007	0.003	**0.007**	0.009	0.003	**0.007**	0.010
N	1	V36	WN10PH	WN10PH	1033	**1476**	1919	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.006**	0.007	0.003	**0.006**	0.009
N	2	V36	WN10PH	WN10PH	886	**1181**	1476	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.006**	0.007	0.003	**0.006**	0.009
N	3	V36	WN10PH	WN10PH	886	**1181**	1476	in/rev	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.006**	0.007	0.003	**0.006**	0.009
S	1	V36	WM35PH	WM35PH	180	**213**	230	in/rev	0.002	**0.002**	0.003	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.004
S	2	V36	WM35PH	WM35PH	148	**180**	213	in/rev	0.002	**0.002**	0.003	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.004
S	3	V36	WM35PH	WM35PH	213	**246**	262	in/rev	0.002	**0.002**	0.003	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.004
S	4	V36	WM35PH	WM35PH	213	**246**	262	in/rev	0.002	**0.002**	0.003	0.002	**0.003**	0.004	0.002	**0.003**	0.004	0.002	**0.004**	0.004

TOP CUT 4 INCH								Recommended Feed Rate by Diameter (2 & 3 L/D)															
Material Group	Material Sub-group	Geometry	Grade		Cutting Speed - V_c			Inboard Insert Outboard Insert Ø (mm)	TCF120405EC TCF100408EP 30.00–36.99mm			TCF150406FC TCF120412FP 37.00–45.99mm			TCF180508GC TCF150512GP 46.00–56.99mm			TCF210608HC TCF180614HP 57.00–68.00mm		
					Range - SFM																		
			Center	Periphery	min	**Starting Value**	max	Feed - f_z in/rev	min	**Starting Value**	max	min	**Starting Value**	max	min	**Starting Value**	max	min	**Starting Value**	max
P	0	V38	WM35PH	WM35PH	280	**305**	325	in/rev	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.005**	0.007	0.003	**0.006**	0.008
P	1	V34	WU40PH	WPK10CH	280	**305**	325	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
P	2	V34	WU40PH	WPK10CH	280	**305**	325	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
P	3	V34	WU40PH	WPK10CH	235	**265**	290	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
P	4	V34	WU40PH	WPK10CH	200	**235**	270	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
P	5	V36	WU40PH	WU25CH	160	**180**	200	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
P	6	V36	WU40PH	WU25CH	160	**180**	200	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
M	1	V36	WM35PH	WM35PH	120	**165**	210	in/rev	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.007	0.003	**0.006**	0.008
M	2	V36	WM35PH	WM35PH	110	**150**	190	in/rev	0.003	**0.005**	0.006	0.003	**0.005**	0.007	0.003	**0.006**	0.007	0.003	**0.006**	0.008
M	3	V36	WM35PH	WM35PH	90	**130**	170	in/rev	0.002	**0.004**	0.006	0.002	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007
K	1	V34	WU40PH	WPK10CH	180	**225**	270	in/rev	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012	0.005	**0.009**	0.013
K	2	V34	WU40PH	WPK10CH	160	**200**	235	in/rev	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012	0.005	**0.009**	0.013
K	3	V34	WU40PH	WPK10CH	160	**200**	235	in/rev	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012	0.005	**0.009**	0.013
N	1	V36	WN10PH	WN10PH	315	**450**	585	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
N	2	V36	WN10PH	WN10PH	270	**360**	450	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
N	3	V36	WN10PH	WN10PH	270	**360**	450	in/rev	0.004	**0.007**	0.009	0.004	**0.007**	0.011	0.004	**0.008**	0.011	0.004	**0.008**	0.012
S	1	V36	WM35PH	WM35PH	55	**65**	70	in/rev	0.003	**0.004**	0.005	0.003	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007
S	2	V36	WM35PH	WM35PH	45	**55**	65	in/rev	0.003	**0.004**	0.005	0.003	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007
S	3	V36	WM35PH	WM35PH	65	**75**	80	in/rev	0.003	**0.004**	0.005	0.003	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007
S	4	V36	WM35PH	WM35PH	65	**75**	80	in/rev	0.003	**0.004**	0.005	0.003	**0.004**	0.006	0.003	**0.005**	0.006	0.003	**0.005**	0.007

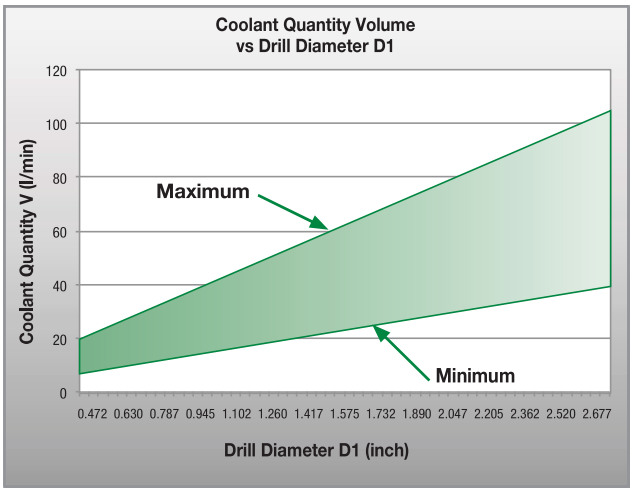
Top Cut 4 • Drill Depth • 2 x D/3 x D • Hole Tolerance Table

Insert size	Diameter Range (in)	Hole Tolerance (in)
A	0.472-0.550	+/- 0.008
B	0.551-0.748	+/- 0.008
C	0.749-0.944	+/- 0.008
D	0.945-1.181	+/- 0.008
E	1.182-1.456	+/- 0.008
F	1.157-1.811	+/- 0.010
G	1.812-2.244	+/- 0.010
H	2.245-2.677	+/- 0.011

Top Cut 4 • Drill Depth • 4 x D/5 x D • Hole Tolerance Table

Insert size	Diameter Range (in)	Hole Tolerance (in)
A	0.472-0.550	+/- 0.014
B	0.551-0.748	+/- 0.014
C	0.749-0.944	+/- 0.014
D	0.945-1.181	+/- 0.014
E	1.182-1.456	+/- 0.014
F	1.157-1.811	+/- 0.015
G	1.812-2.244	+/- 0.015
H	2.245-2.677	+/- 0.017

Coolant Requirement/Recommendation




WIDIA
TCF250R3SLR32MD
Ø 25
B5KV03
Made in Bulgaria
Ø 25

REAL TOOLS FOR REAL WORK.

AHB

TOOLING & MACHINERY

COMPLETE METALWORKING SOLUTIONS

(800) 991-4225
ISO Certified

www.ahbinc.com
customerservice@ahbinc.com

WIDIA

RELIABLE CUTTING TOOLS
FOR EVERY MACHINE SHOP

widia.com/**TopCut4**