

# MULTISURFER™

MILLING PRODUCTS

**Tip Style Series:**  
T-Slot: 18T, 19T  
Facing: 18F, 19F  
Thread: 18Y, 19Y

**Diameter (Connection Code):**  
0.97" / 25mm (LP)  
1.25" / 32mm (LQ)  
1.56" / 40mm (LR)

**Shank Adaptors:**  
Cylindrical

**Materials:**  
Cast Iron, Steel, Stainless Steel,  
High-Temp Alloys & Titanium



## Quick-Change Interchangeable Solid Carbide Heads for Slotting, Facing & Threading

Multi-Surfer is a replaceable head system for larger diameter solid carbide slotting, facing and single point threading. It bridges a diameter gap between Ingersoll's popular Chip-Surfer and Indexable Slotters. To oppose the cutting forces that accompany larger diameters, Multi-Surfer is equipped with a unique and simple design that allows for precise and rigid mounting.

### Features & Benefits:

- .970-1.560 T-Slot heads with .125-.375 width range and 6-10 flutes
- 24-39mm Facing heads with 6-10 flutes; Ideal for stubby applications
- 60° Partial Profile Thread heads with 6-10 flutes
- Cylindrical shanks with strong Bore, Screw & Tri-Lobe-Drive connection
- Steel shanks with various configurations and coolant options



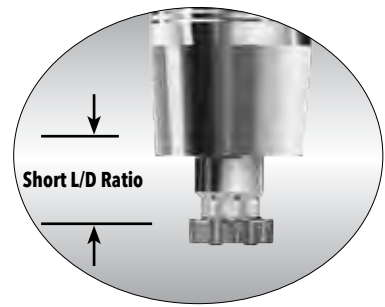
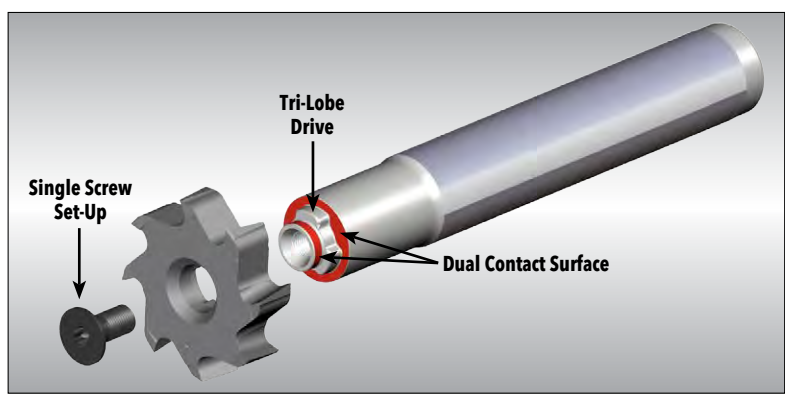
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**FEATURES**

**Stable, Secure Drive Adaption**



**More Cutting Edges Maximize Productivity**

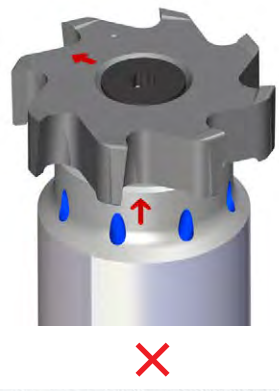
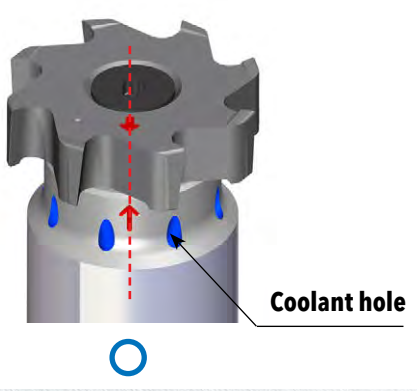
Indexable  
Low Density



**MULTISURFER**  
High Density



**Coolant Alignment**



When internal coolant is applied by combining the 18F/19F head with the S-L-SA holder, the arrows shown on the head and holder must be positioned opposite to each other (as shown below) in order to ensure a smooth coolant flow to the cutting edge.

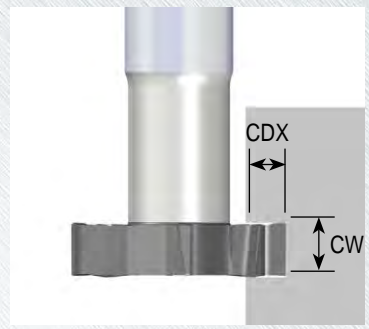




**MULTISURFER™ SIZE RANGES**

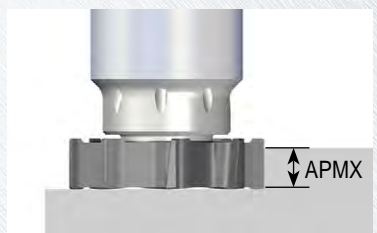
**Slotting 18T/19T**

Tool diameter (inch/mm)	CW Cutting Width (inch/mm)	CDX Cutting Depth (inch/mm)
.970" / 24.7mm	.12-.31" / 3-8mm	.21" / 5.5mm
1.250" / 31.7mm	.12-.31" / 3-8mm	.31" / 8mm
1.562" / 39.7mm	.15-.37" / 4-10mm	.39" / 11mm



**Facing 18F/19F**

Tool diameter (mm)	APMX Depth of Cut Max. (mm)	Number of teeth
25	8	6
32	8	8
40	10	10



**Threading 18Y/19Y**

Tool diameter (mm)	Screw profile	Number of teeth
24.7	M60	6
31.7	M60	8
39.7	M60	10

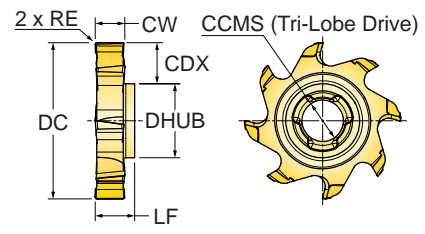
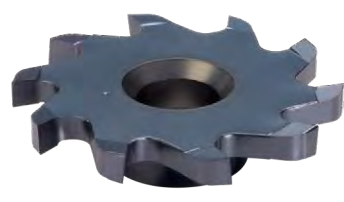
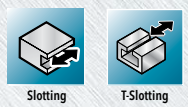






**MULTISURFER™ SERIES 18T, 19T**

T-SLOT TIP



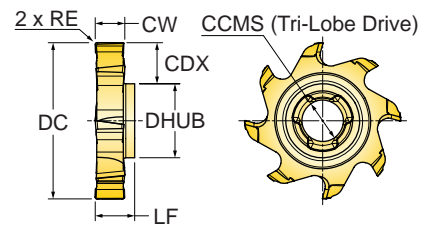
Part Number	DC Cutting Diameter	RE Corner Radius	CW Cutting Width	CDX Cutting Depth Max.	LF Functional Length	ZEFF Eff. Teeth	CCMS Connection Code	DHUB Hub Diameter
18T-9712LPRN01	0.970	0.015 R	0.125	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9715LPRN01	0.970	0.015 R	0.156	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9718LPRN01	0.970	0.015 R	0.187	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9721LPRN01	0.970	0.015 R	0.218	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9725LPRN01	0.970	0.015 R	0.250	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9728LPRN01	0.970	0.015 R	0.281	0.210	0.315	6	Multi-Surfer LP	0.510
18T-9731LPRN01	0.970	0.015 R	0.312	0.210	0.315	6	Multi-Surfer LP	0.510
19T-1212LQRN01	1.250	0.015 R	0.125	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1215LQRN01	1.250	0.015 R	0.156	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1218LQRN01	1.250	0.015 R	0.187	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1221LQRN01	1.250	0.015 R	0.218	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1225LQRN01	1.250	0.015 R	0.250	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1228LQRN01	1.250	0.015 R	0.281	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1231LQRN01	1.250	0.015 R	0.312	0.310	0.315	8	Multi-Surfer LQ	0.590
19T-1515LRRN01	1.562	0.015 R	0.156	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1518LRRN01	1.562	0.015 R	0.187	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1521LRRN01	1.562	0.015 R	0.218	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1525LRRN01	1.562	0.015 R	0.250	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1528LRRN01	1.562	0.015 R	0.281	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1531LRRN01	1.562	0.015 R	0.312	0.430	0.394	10	Multi-Surfer LR	0.670
19T-1537LRRN01	1.562	0.015 R	0.375	0.430	0.394	10	Multi-Surfer LR	0.670





**MULTISURFER™ SERIES 18T, 19T (METRIC)**

T-SLOT TIP



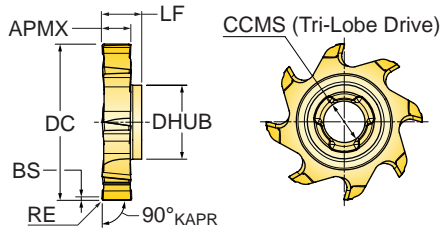
Part Number	DC Cutting Diameter	RE Corner Radius	CW Cutting Width	CDX Cutting Depth Max.	LF Functional Length	ZEFF Eff. Teeth	CCMS Connection Code	DHUB Hub Diameter
18T24730LPRN04	24.70 mm	0.400 R	3.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
18T24740LPRN04	24.70 mm	0.400 R	4.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
18T24750LPRN04	24.70 mm	0.400 R	5.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
18T24760LPRN04	24.70 mm	0.400 R	6.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
18T24770LPRN04	24.70 mm	0.400 R	7.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
18T24780LPRN04	24.70 mm	0.400 R	8.00 mm	5.50 mm	8.00 mm	6	Multi-Surfer LP	13.00 mm
19T31730LQRN04	31.70 mm	0.400 R	3.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T31740LQRN04	31.70 mm	0.400 R	4.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T31750LQRN04	31.70 mm	0.400 R	5.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T31760LQRN04	31.70 mm	0.400 R	6.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T31770LQRN04	31.70 mm	0.400 R	7.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T31780LQRN04	31.70 mm	0.400 R	8.00 mm	8.00 mm	8.00 mm	8	Multi-Surfer LQ	15.00 mm
19T39740LRRN04	39.70 mm	0.400 R	4.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39750LRRN04	39.70 mm	0.400 R	5.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39760LRRN04	39.70 mm	0.400 R	6.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39770LRRN04	39.70 mm	0.400 R	7.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39780LRRN04	39.70 mm	0.400 R	8.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39790LRRN04	39.70 mm	0.400 R	9.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm
19T39799LRRN04	39.70 mm	0.400 R	10.00 mm	11.00 mm	10.00 mm	10	Multi-Surfer LR	17.00 mm





**MULTISURFER™ SERIES 18F, 19F (METRIC)**

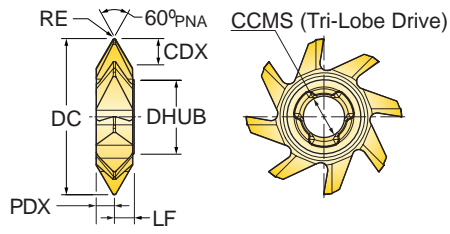
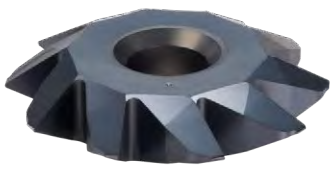
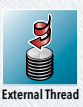
**90° FACE MILL TIP**



Part Number	DC Cutting Diameter	RE Corner Radius	BS Wiper Length	APMX Depth of Cut Max.	LF Functional Length	ZEFF Eff. Teeth	CCMS Connection Code	DHUB Hub Diameter
18F24280LPRA04	25.00 mm	0.400 R	3.60 mm	8.00 mm	8.0 mm	8	Multi-Surfer LP	13.0 mm
19F31280LQRA04	32.00 mm	0.400 R	3.60 mm	8.00 mm	8.0 mm	8	Multi-Surfer LQ	15.0 mm
19F39210LRAA04	40.00 mm	0.400 R	3.60 mm	10.00 mm	10.0 mm	10	Multi-Surfer LR	17.0 mm

**MULTISURFER™ SERIES 18Y\_60, 19Y\_60**

**THREAD MILL TIP**



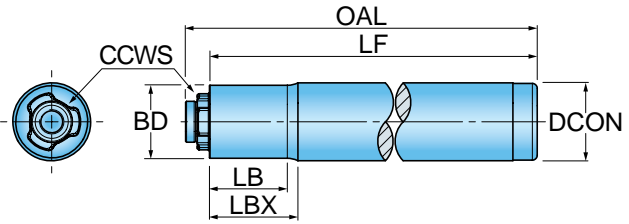
Part Number	DC Cutting Diameter	TPN Thread Pitch Min.	TPX Thread Pitch Max.	TPIN Thread Pitch Inch Min.	TPIX Thread Pitch Inch Max.	PNA Profile Included Angle	RE Corner Radius	PDX Profile Distance Ex.	CDX Cutting Depth Max.	LF Functional Length.	DWN Workpiece Dia. Min.	ZEFF Eff. Flutes	CCMS Connection Code	DHUB Hub Diameter
18Y24730LPRP60	24.70 mm	3.0	5.0	8	5	60	0.20mm	2.2mm	3.50mm	5.50mm	36.0 mm	6	Multi-Surfer LP	13.0mm
19Y31740LQRP60	31.70 mm	4.0	6.0	6	4	60	0.30mm	3.7mm	4.70mm	4.00mm	46.0 mm	8	Multi-Surfer LQ	15.0mm
19Y39760LRRP60	39.70 mm	6.0	8.0	4	3	60	0.40mm	4.5mm	6.20mm	5.00mm	57.0 mm	10	Multi-Surfer LR	17.0mm





**MULTISURFER™ SERIES S\*L\*SA**

**STEEL SHANK, NECKED**



Part Number	CCWS Connection Code	LB Body Length 1	LBX Body Length Max.	LF Functional Length	OAL Overall Length	BD Body Diameter	DCON Shank Diameter	BMC Body Material Code
<b>INCH</b>								
S062LPSA-05	Multi-Surfer LP	0.600"	0.650"	4.000"	4.170"	0.510"	0.625"	Steel
S062LQSA-06	Multi-Surfer LQ	0.700"	0.720"	4.000"	4.190"	0.590"	0.625"	Steel
S062LQSA-07	Multi-Surfer LQ	0.780"	0.800"	5.000"	5.190"	0.590"	0.625"	Steel
S075LRSA-08	Multi-Surfer LR	0.900"	0.940"	5.500"	5.730"	0.670"	0.750"	Steel
<b>METRIC</b>								
S016LPSA-16	Multi-Surfer LP	13.00 mm	16.60 mm	100.00 mm	104.35 mm	13.00 mm	16.00 mm	Steel
S016LQSA-18	Multi-Surfer LQ	16.00 mm	18.20 mm	100.00 mm	104.90 mm	15.00 mm	16.00 mm	Steel
S016LQSA-19	Multi-Surfer LQ	16.00 mm	18.20 mm	130.00 mm	134.90 mm	15.00 mm	16.00 mm	Steel
S020LRSA-23	Multi-Surfer LR	20.20 mm	23.80 mm	140.00 mm	146.00 mm	17.00 mm	20.00 mm	Steel

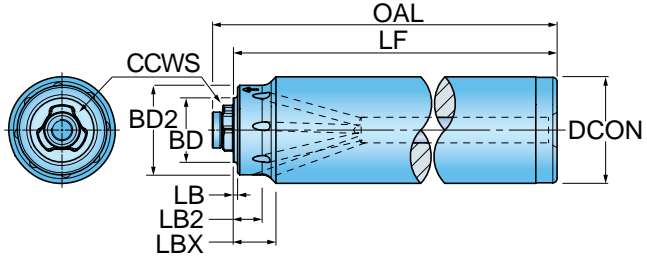
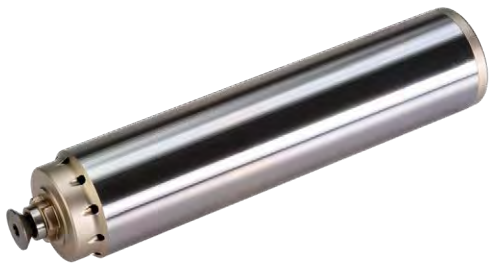
\*Shank modifications can be made by cutting off the back to desired length or turning back the neck for more usable length.





**MULTISURFER™ SERIES S\*L\*SA**

**STEEL SHANK**



Part Number	CCWS Connection Code	LB Body Length 1	LB2 Body Length 2	LBX Body Length Max.	LF Functional Length	OAL Overall Length	BD Body Dia.	BD2 Body Dia. 2	DCON Shank Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Code	BMC Body Mat'l Code
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**INCH**

S075LPSA-03	Multi-Surfer LP	0.030"	0.300"	0.380"	4.250"	4.420"	0.510"	0.625"	0.750"	1	1, 3	Steel
S100LQSA-03	Multi-Surfer LQ	0.030"	0.300"	0.380"	4.250"	4.440"	0.590"	0.812"	1.000"	1	1, 3	Steel
S125LRSA-03	Multi-Surfer LR	0.030"	0.300"	0.380"	5.750"	5.980"	0.670"	1.125"	1.250"	1	1, 3	Steel

**METRIC**

S020LPSA-10	Multi-Surfer LP	0.76 mm	7.60 mm	10.00 mm	100.00 mm	104.35 mm	13.00 mm	16.00 mm	20.00 mm	1	1, 3	Steel
S025LQSA-10	Multi-Surfer LQ	0.76 mm	7.60 mm	10.00 mm	100.00 mm	104.90 mm	15.00 mm	21.00 mm	25.00 mm	1	1, 3	Steel
S032LRSA-10	Multi-Surfer LR	0.76 mm	7.60 mm	10.00 mm	140.00 mm	146.00 mm	17.00 mm	28.00 mm	32.00 mm	1	1, 3	Steel

\*Shank modifications can be made by cutting off the back to desired length.

**MULTISURFER™ HARDWARE**



Screw

Driver Handle

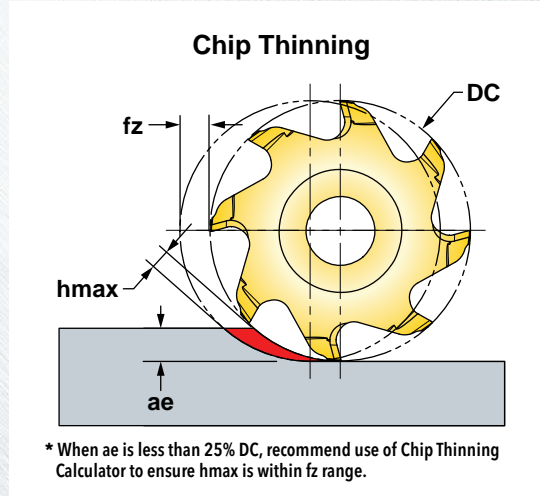
Torx Bit

S062LPSA-05	TS40T098/HG-P	DS-A00T	DS-TP156B
S062LQSA-06	TS50T110/HG-P	DS-A00T	DS-TP206B
S062LQSA-07	TS50T110/HG-P	DS-A00T	DS-TP206B
S075LRSA-08	TS60T130/HG-P	DS-A00T	DS-TP206B
S016LPSA-16	TS40T098/HG-P	DS-A00T	DS-TP156B
S016LQSA-18	TS50T110/HG-P	DS-A00T	DS-TP206B
S016LQSA-19	TS50T110/HG-P	DS-A00T	DS-TP206B
S020LRSA-23	TS60T130/HG-P	DS-A00T	DS-TP206B
S075LPSA-03	TS40T098/HG-P	DS-A00T	DS-TP156B
S100LQSA-03	TS50T110/HG-P	DS-A00T	DS-TP206B
S125LRSA-03	TS60T130/HG-P	DS-A00T	DS-TP206B
S020LPSA-10	TS40T098/HG-P	DS-A00T	DS-TP156B
S025LQSA-10	TS50T110/HG-P	DS-A00T	DS-TP206B
S032LRSA-10	TS60T130/HG-P	DS-A00T	DS-TP206B





**MULTISURFER™ OPERATING GUIDELINES**



Materials				Vc Cutting Speed SFM	fz* Feed/Tooth (inch)	Coolant
ISO	Mat'l Group #VDI 3323	Type	Examples			
<b>P</b>	1 thru 5	Non-alloy Steel	1018, A36, 1045, A572, 1070	450-650	.002-.007	No
	6 thru 9	Low-alloy Steel	4140, 4340, P20, 8620, 300M	450-650		
	10, 11	High-alloy Steel	H13, A2, D2, M2, T1	400-600		
<b>M</b>	12 thru 13	Stainless Steel (Fer- ritic & Martensitic)	410, 416, 440	200-450	.002-.005	Yes
	14	Stainless Steel (Austenitic)	303, 304, 316, 15-5, 17-4			May not be required at high speeds
<b>K</b>	15 thru 16	Gray Cast Iron	CLS. 20, 30, 45	500-800	.002-.008	No
	17 thru 20	Nodular Cast Iron	60-40-18, 100-70-03			
<b>S</b>	31 thru 35	High-Temp Alloys	Inconel, Hastelloy, Nimonic, Monel	65-150	.002-.005	Yes
	36 thru 37	Titanium Alloys	6Al-4V, 5Al-5Mo-5V-3Cr			

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases. Additionally, DOC and WOC may need to be revised to optimize the tools performance.



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