

New Product Announcement

NEW-413 • 6/2025

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MILLING - CHIPSURFER SHANKS

Materials

Steel
Carbide
Heavy Metal
Antivibe

Neck Treatment

Necked
Necked with Thrust Coolant
No Neck
Cone Neck
Chamfered Neck

Adaption Style Workpiece Side

T05, T06, T08, T12, T15, & T21

Adaption Style Machine Side

Cylindrical Shank
Weldon Shank
TopOn: M6, M8, M10, M12
Solid ER
HSKA
C-adaptor
DIN69871

Coolant Exit Styles

No Coolant
Thrust Coolant
Axial Concentric
Axial Concentric & Inclined

CHIPSURFER™



Enormous selection of shanks offers tremendous flexibility!

Ingersoll is pleased to announce a significant expansion to the Chip Surfer shank line....featuring new Reducers, more coolant shank options, more length options, and Anti-Vibe cylindrical shanks. The anti-vibe shanks incorporate a carbide body with a built-in vibration-dampening mechanism that effectively minimize vibration that is common to long reach applications. Whether roughing or finishing, anti-vibe technology offers significant tool life and surface finish benefits.

Material Selection:

- » Steel - Value & Durability
- » Carbide - Finishing Applications
- » Heavy Metal - Long Reach Roughing
- » AntiVibe - Diffusing Chatter in Long Reach Applications

Neck Treatment Selection:

- » Conical - Aids with Rigidity in Long Reach Applications
- » Necked - Utmost Side Clearance when Shouldering
- » No Neck - Offers Flexibility, Made for Modification

Various coolant plumbing styles that accommodates solid & coolant through tips and heads

See the
full line »



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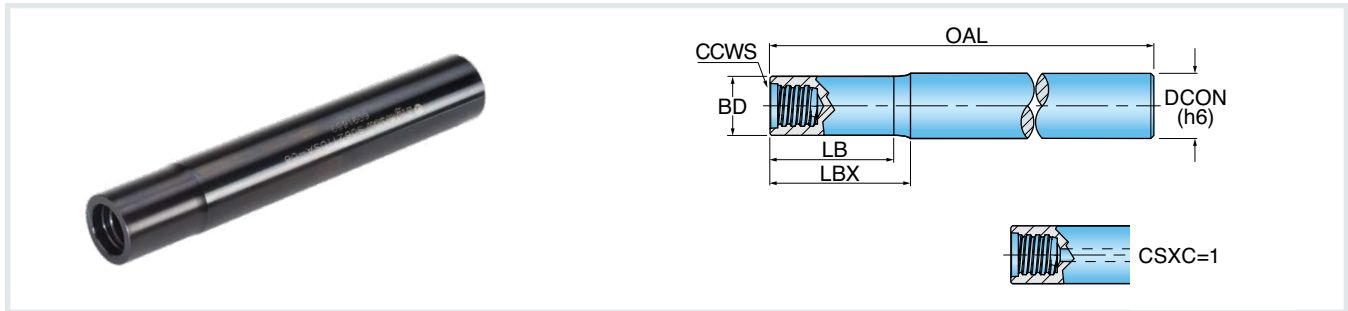
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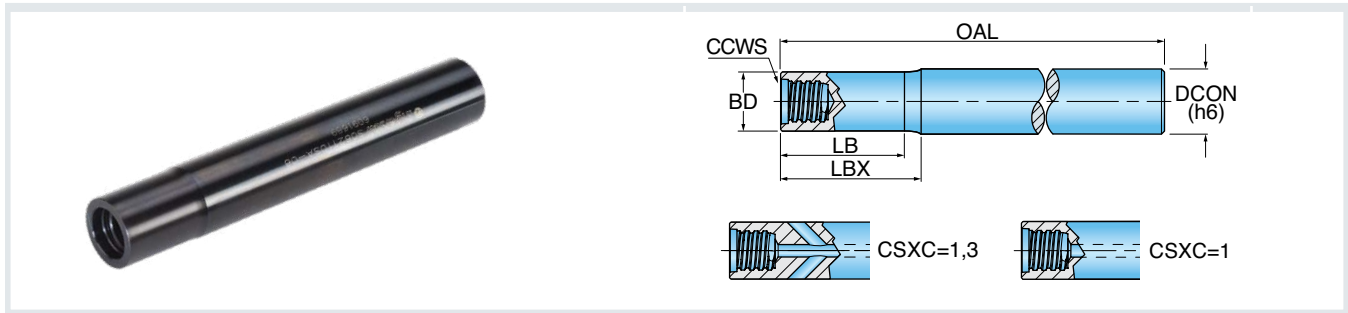
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S*T*SA - Steel Shank, Necked EXPANSION!



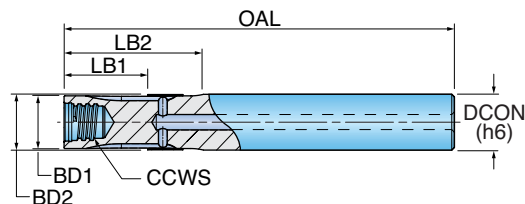
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH									
S031T05SA-05	0.313	Chip Surfer T05	0.510	0.600	2.500	0.300	0	0	60000
S037T06SA-06	0.375	Chip Surfer T06	0.510	0.600	3.000	0.364	0	0	60000
S037T06SA-06-01	0.375	Chip Surfer T06	0.600	0.670	3.000	0.364	1	1	47670
S050T08SA-06	0.500	Chip Surfer T08	0.530	0.600	3.540	0.480	0	0	42000
S050T08SA-06-01	0.500	Chip Surfer T08	0.590	0.600	3.500	0.480	1	1	42000
S050T08SA-061	0.500	Chip Surfer T08	0.530	0.630	3.540	0.455	0	0	42000
S062T10SA-06	0.625	Chip Surfer T10	0.680	0.800	4.000	0.600	0	0	39000
S062T10SA-08-01	0.625	Chip Surfer T10	0.680	0.800	4.000	0.600	1	1	35730
S075T12SA-08	0.750	Chip Surfer T12	0.880	1.000	5.000	0.720	0	0	36600
S075T12SA-10-01	0.750	Chip Surfer T12	1.000	1.090	5.000	0.720	1	1	39480
S100T15SA-13	1.000	Chip Surfer T15	1.300	1.400	5.300	0.940	0	0	28200
S100T15SA-15-01	1.000	Chip Surfer T15	1.500	1.620	5.500	0.941	1	1	19470
S100T15SA-24	1.000	Chip Surfer T15	2.400	2.500	7.000	0.940	0	0	16890
S125T21SA-12	1.250	Chip Surfer T21	1.200	1.320	4.000	1.181	0	0	12690
S125T21SA-15	1.250	Chip Surfer T21	1.500	1.630	6.000	1.181	0	0	12690
NEW S125T21SA-60-01	1.250	Chip Surfer T21	1.500	1.620	6.000	1.181	1	1	12690

S*T*SA - Steel Shank, Necked EXPANSION!



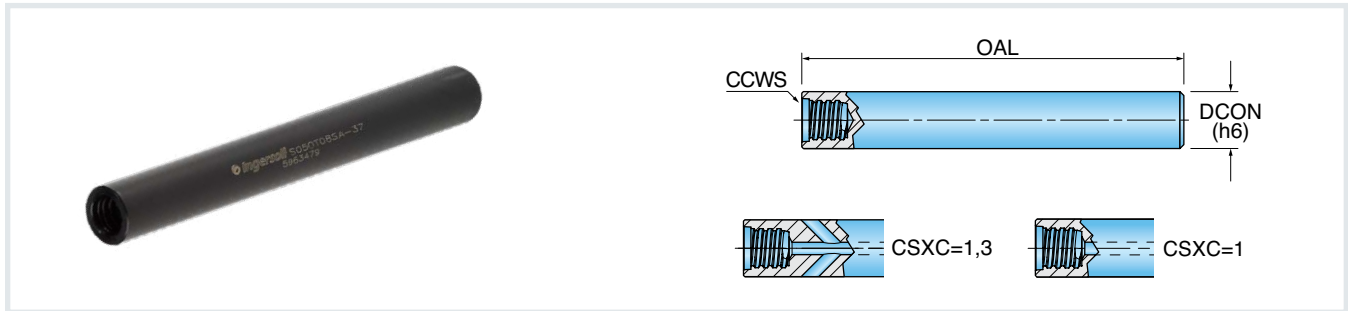
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
METRIC									
S008T05DA015	8.00 mm	Chip Surfer T05	13.00 mm	15.00 mm	60.00 mm	7.60 mm	1	1	60000
S008T05SA015	8.00 mm	Chip Surfer T05	12.50 mm	15.00 mm	60.00 mm	7.60 mm	0	0	60000
S010T06DA012-01	10.00 mm	Chip Surfer T06	10.60 mm	12.00 mm	75.00 mm	9.60 mm	1	1	53940
S010T06DA020	10.00 mm	Chip Surfer T06	18.80 mm	20.00 mm	75.00 mm	9.60 mm	1	1, 3	53940
S010T06SA020	10.00 mm	Chip Surfer T06	17.40 mm	20.00 mm	75.00 mm	9.60 mm	0	0	60000
S012T08DA014-01	12.00 mm	Chip Surfer T08	13.00 mm	14.00 mm	90.00 mm	11.60 mm	1	1	43000
S012T08DA015	12.00 mm	Chip Surfer T08	38.70 mm	40.00 mm	90.00 mm	11.60 mm	1	1, 3	41040
S012T08DA042-01	12.00 mm	Chip Surfer T08	41.00 mm	42.00 mm	90.00 mm	11.60 mm	1	1	41010
S012T08SA015	12.00 mm	Chip Surfer T08	13.30 mm	16.00 mm	90.00 mm	11.60 mm	0	0	43000
S016T10DA018	16.00 mm	Chip Surfer T10	48.00 mm	50.00 mm	100.00 mm	15.30 mm	1	1, 3	37140
S016T10DA020-01	16.00 mm	Chip Surfer T10	18.00 mm	20.00 mm	100.00 mm	15.30 mm	1	1	37140
S016T10DA042-01	16.00 mm	Chip Surfer T10	40.20 mm	42.00 mm	100.00 mm	15.30 mm	1	1	38040
S016T10SA018	16.00 mm	Chip Surfer T10	16.30 mm	20.00 mm	100.00 mm	15.30 mm	0	0	39000
S020T12DA025	20.00 mm	Chip Surfer T12	66.70 mm	70.00 mm	120.00 mm	18.30 mm	1	1, 3	32160
S020T12DA025-01	20.00 mm	Chip Surfer T12	22.20 mm	25.00 mm	120.00 mm	18.30 mm	1	1	32160
S020T12DA048-01	20.00 mm	Chip Surfer T12	45.20 mm	48.00 mm	120.00 mm	18.30 mm	1	1	32160
S020T12SA025	20.00 mm	Chip Surfer T12	20.30 mm	25.00 mm	120.00 mm	18.30 mm	0	0	36000
S025T15DA035-01	25.00 mm	Chip Surfer T15	33.00 mm	35.00 mm	135.00 mm	23.90 mm	1	1	28230
S025T15DA050-01	25.00 mm	Chip Surfer T15	47.70 mm	50.00 mm	135.00 mm	23.90 mm	1	1	28230
S025T15SA035	25.00 mm	Chip Surfer T15	33.00 mm	35.00 mm	135.00 mm	23.90 mm	0	0	28290
NEW S025T15SA062	25.00 mm	Chip Surfer T15	62.70 mm	65.00 mm	175.00 mm	23.90 mm	0	0	16890
NEW S032T21SA032	32.00 mm	Chip Surfer T21	32.00 mm	35.30 mm	100.00 mm	30.00 mm	0	0	12690
NEW S032T21SA050	32.00 mm	Chip Surfer T21	50.00 mm	53.50 mm	150.00 mm	30.00 mm	0	0	12690
NEW S032T21DA050	32.00 mm	Chip Surfer T21	50.00 mm	53.30 mm	150.00 mm	30.00 mm	1	1	12690

S*T*NA - Steel Shank, Thrust Cool



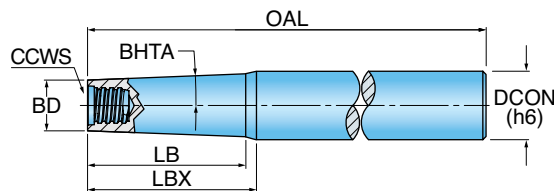
Part Number	DCON Shank Dia.	CCWS Conetion Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BD2 Body Dia. 2	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH										
S037T06NA-06	0.375	Chip Surfer T06	0.650	1.000	3.000	0.350	0.374	1	7	60000
S037T06NA-12	0.375	Chip Surfer T06	1.250	1.650	3.750	0.350	0.374	1	7	40594
S050T08NA-07	0.500	Chip Surfer T08	0.750	1.250	3.500	0.472	0.496	1	7	49363
S050T08NA-15	0.500	Chip Surfer T08	1.500	2.000	4.250	0.472	0.496	1	7	35000
S062T10NA-08	0.625	Chip Surfer T10	0.850	1.350	4.000	0.600	0.624	1	7	40743
S062T10NA-17	0.625	Chip Surfer T10	1.750	2.250	5.000	0.600	0.624	1	7	27500
S075T12NA-08	0.750	Chip Surfer T12	0.850	1.350	4.500	0.720	0.740	1	7	34500
S075T12NA-17	0.750	Chip Surfer T12	1.750	2.250	5.750	0.720	0.740	1	7	22300
S100T15NA-09	1.000	Chip Surfer T15	0.900	1.370	5.000	0.940	0.960	1	7	31500
S100T15NA-20	1.000	Chip Surfer T15	2.000	2.500	6.000	0.940	0.960	1	7	23000
METRIC										
S010T06NA018	10.00 mm	Chip Surfer T06	18.00 mm	28.00 mm	75.00 mm	9.60 mm	9.90 mm	1	7	60000
S012T08NA018	12.00 mm	Chip Surfer T08	18.00 mm	30.00 mm	90.00 mm	11.60 mm	11.90 mm	1	7	45667
S016T10NA023	16.00 mm	Chip Surfer T10	23.00 mm	35.00 mm	100.00 mm	15.30 mm	15.80 mm	1	7	42242

S*T*SA - Steel Shank, No Neck EXPANSION!



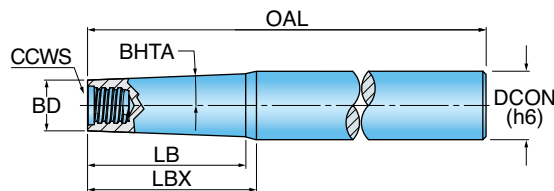
Part Number	CCWS Conection Code Workpiece Side	OAL Overall Length	DCON Shank Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH						
S031T05SA-27	Chip Surfer T05	2.750	0.313	0	0	60000
S037T06SA-21	Chip Surfer T06	2.130	0.375	1	1	47670
S037T06SA-32	Chip Surfer T06	3.250	0.375	0	0	47400
S050T08SA-37	Chip Surfer T08	3.750	0.500	0	0	43110
S062T10SA-40	Chip Surfer T10	4.000	0.625	0	0	39420
METRIC						
S008T05DA070	Chip Surfer T05	70.00 mm	8.000 mm	1	1	60000
S008T05SA070	Chip Surfer T05	70.00 mm	8.000 mm	0	0	60000
S010T06DA010	Chip Surfer T06	80.00 mm	10.000 mm	1	1, 3	46920
S010T06SA010	Chip Surfer T06	80.00 mm	10.000 mm	0	0	47400
S012T08DA012	Chip Surfer T08	90.00 mm	12.000 mm	1	1, 3	42780
S012T08SA012	Chip Surfer T08	90.00 mm	12.000 mm	0	0	43110
NEW S016T10DA070	Chip Surfer T10	70.00 mm	16.000 mm	1	1	39420
S016T10DA016	Chip Surfer T10	100.00 mm	16.000 mm	1	1, 3	39210
S016T10SA016	Chip Surfer T10	100.00 mm	16.000 mm	0	0	39420
NEW S020T12DA090	Chip Surfer T12	90.00 mm	20.000 mm	1	1	
NEW S025T15DA100	Chip Surfer T15	100.00 mm	25.000 mm	1	1	

S*T*SK - Steel Shank, Cone Neck EXPANSION!



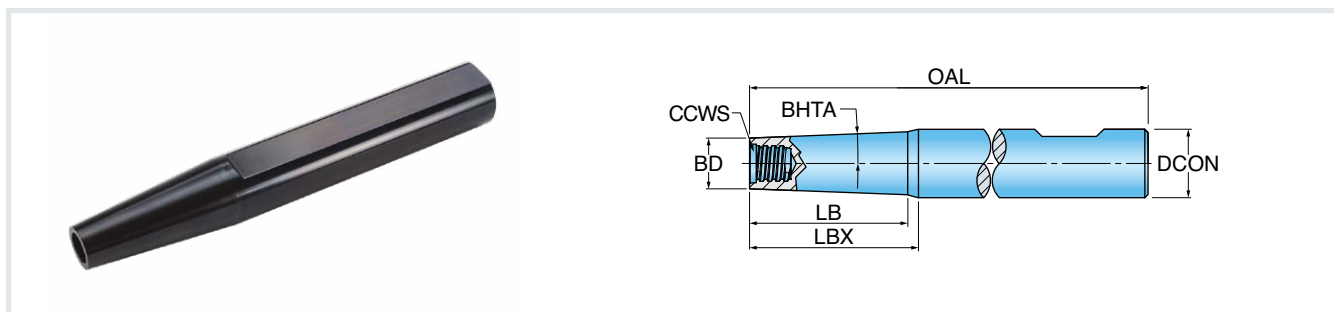
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	RPMX RPM Max.
INCH								
NEW S050T05SK-10	0.500	Chip Surfer T05	0.930	1.000	3.000	0.299	5.0	60000
NEW S050T05SK-15	0.500	Chip Surfer T05	1.300	1.500	4.000	0.299	1.0	53000
NEW S062T05SK-12	0.625	Chip Surfer T05	1.200	1.200	3.500	0.299	5.0	41280
S062T06SK-13	0.625	Chip Surfer T06	1.283	1.380	5.000	0.364	5.0	41280
S062T06SK-21	0.625	Chip Surfer T06	1.750	2.170	6.300	0.364	1.0	23000
S062T08SK-08	0.625	Chip Surfer T08	0.770	0.870	5.500	0.480	5.0	25590
NEW S075T06SK-16	0.750	Chip Surfer T06	1.385	1.600	4.000	0.364	5.0	41280
NEW S075T08SK-15	0.750	Chip Surfer T08	1.540	1.540	4.000	0.480	5.0	25590
S075T08SK-31	0.750	Chip Surfer T08	2.770	3.150	6.500	0.480	1.0	22600
NEW S075T10SK-31	1.000	Chip Surfer T10	2.950	3.150	7.500	0.602	1.0	15780
S100T10SK-22	1.000	Chip Surfer T10	2.300	2.300	6.700	0.600	5.0	29490
S100T12SK-16	1.000	Chip Surfer T12	1.600	1.600	6.300	0.720	5.0	29490
S100T12SK-34	1.000	Chip Surfer T12	3.400	3.750	8.000	0.720	1.0	15500
NEW S125T12SK-30	1.250	Chip Surfer T12	3.030	3.030	6.000	0.720	5.0	29490
S125T12SK-31	1.250	Chip Surfer T12	3.150	3.150	7.500	0.720	5.0	34800
S125T15SK-18	1.250	Chip Surfer T15	1.800	1.800	8.000	0.940	5.0	14160
S125T15SK-40	1.250	Chip Surfer T15	3.660	4.000	10.000	0.940	1.0	20300
NEW S150T15SK-32	1.500	Chip Surfer T15	3.200	3.200	7.000	0.941	5.0	14160
S150T21SK-18	1.500	Chip Surfer T21	1.820	1.820	6.000	1.181	5.0	21840

S*T*SK - Steel Shank, Cone Neck **EXPANSION!**



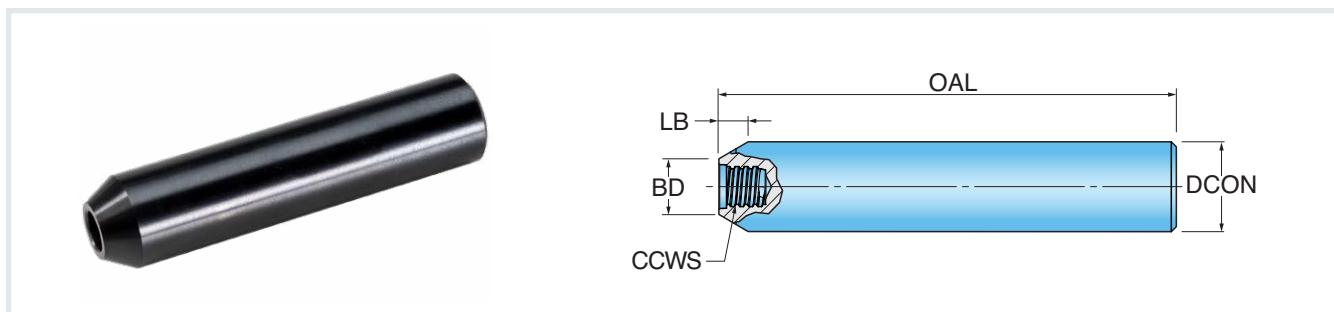
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	RPMX RPM Max.
METRIC								
NEW S012T05SK025	12.00 mm	Chip Surfer T05	25.00 mm	25.00 mm	80.00 mm	7.60 mm	5.0	60000
S012T05SK031	12.00 mm	Chip Surfer T05	29.60 mm	35.00 mm	100.00 mm	7.60 mm	1.0	52000
NEW S016T05SK027	16.00 mm	Chip Surfer T05	27.00 mm	32.00 mm	85.00 mm	9.60 mm	5.0	41280
S016T06SK034	16.00 mm	Chip Surfer T06	31.60 mm	34.00 mm	125.00 mm	9.60 mm	5.0	41280
S016T06SK045	16.00 mm	Chip Surfer T06	46.80 mm	55.00 mm	160.00 mm	9.60 mm	1.0	23370
S016T08SK022	16.00 mm	Chip Surfer T08	19.30 mm	22.00 mm	140.00 mm	11.60 mm	5.0	25590
NEW S020T06SK034	20.00 mm	Chip Surfer T06	34.00 mm	40.00 mm	95.00 mm	9.60 mm	5.0	41280
NEW S020T08SK048	20.00 mm	Chip Surfer T08	48.00 mm	48.00 mm	100.00 mm	11.60 mm	5.0	25590
S020T08SK080	20.00 mm	Chip Surfer T08	69.70 mm	80.00 mm	170.00 mm	11.60 mm	1.0	22680
NEW S020T10SK027	20.00 mm	Chip Surfer T10	27.00 mm	27.00 mm	140.00 mm	15.30 mm	5.0	31020
S020T10SK073	20.00 mm	Chip Surfer T10	73.70 mm	80.00 mm	190.00 mm	15.30 mm	1.0	15780
NEW S025T10SK055	25.00 mm	Chip Surfer T10	55.40 mm	55.40 mm	120.00 mm	15.30 mm	5.0	29490
NEW S025T10SK056	25.00 mm	Chip Surfer T10	56.00 mm	56.00 mm	170.00 mm	15.30 mm	5.0	29490
S025T12SK040	25.00 mm	Chip Surfer T12	40.00 mm	40.00 mm	160.00 mm	18.30 mm	5.0	28680
S025T12SK100	25.00 mm	Chip Surfer T12	91.00 mm	100.00 mm	210.00 mm	18.30 mm	1.0	15540
NEW S032T12SK078	32.00 mm	Chip Surfer T12	78.30 mm	78.30 mm	150.00 mm	18.30 mm	5.0	34890
S032T12SK080	32.00 mm	Chip Surfer T12	80.00 mm	80.00 mm	190.00 mm	18.30 mm	5.0	34890
NEW S032T15SK050	32.00 mm	Chip Surfer T15	50.00 mm	50.00 mm	200.00 mm	23.90 mm	5.0	14160
NEW S032T12SK090	32.00 mm	Chip Surfer T15	90.10 mm	100.00 mm	250.00 mm	23.90 mm	1.0	14160
NEW S040T15SK092	40.00 mm	Chip Surfer T15	92.00 mm	92.00 mm	180.00 mm	23.90 mm	5.0	14160
NEW S040T21SK057	40.00 mm	Chip Surfer T21	57.00 mm	57.00 mm	150.00 mm	30.00 mm	5.0	21840

S*T*K - Steel Weldon, Cone Neck



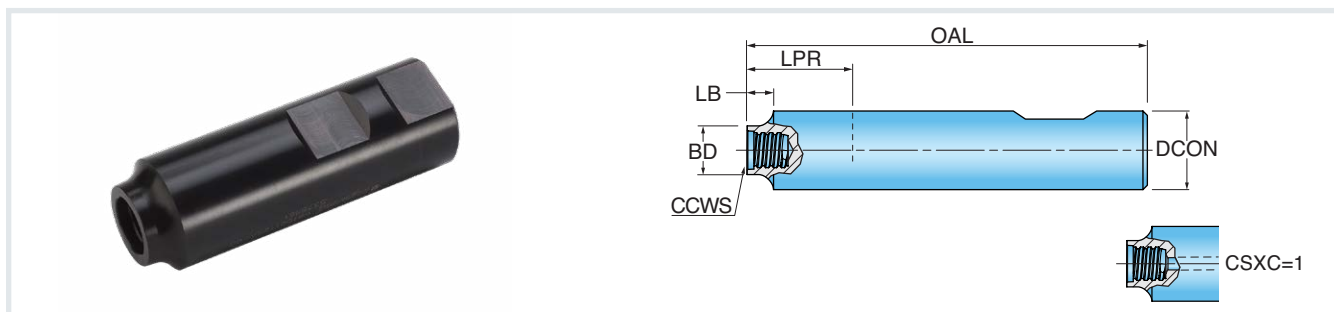
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	RPMX RPM Max.
INCH								
WB150T15SK-34	1.500	Chip Surfer T15	3.400	3.400	10.000	0.940	5.0	21840
METRIC								
S040T15SK100	40.00 mm	Chip Surfer T15	100.00 mm	100.00 mm	250.00 mm	23.90 mm	5.0	21840

S*T*SK - Steel Shank, Chamfered Neck **EXPANSION!**



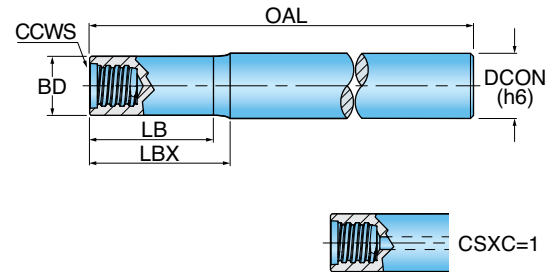
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	BD Body Dia.	OAL Overall Length	RPMX RPM Max.
INCH						
NEW S075T05SK-30	0.750	Chip Surfer T05	0.390	0.299	3.000	60000
NEW S100T06SK-35	1.000	Chip Surfer T06	0.551	0.364	3.500	60000
NEW S100T08SK-35	1.000	Chip Surfer T08	0.450	0.480	3.500	60000
NEW S125T10SK-35	1.250	Chip Surfer T10	0.561	0.602	3.500	60000
NEW S150T21SK-40	1.500	Chip Surfer T21	0.276	1.181	4.000	60000
METRIC						
S012T05SA150	12.000 mm	Chip Surfer T05	3.810 mm	7.600 mm	150.00 mm	18270
S016T06SA200	16.000 mm	Chip Surfer T06	5.600 mm	9.600 mm	200.00 mm	11970
NEW S020T05SA070	20.000 mm	Chip Surfer T05	10.740 mm	7.600 mm	70.00 mm	60000
S020T08SA250	20.000 mm	Chip Surfer T08	7.360 mm	11.500 mm	250.00 mm	9330
NEW S025T06SA080	25.000 mm	Chip Surfer T06	13.340 mm	9.600 mm	80.00 mm	60000
NEW S025T08SA080	25.000 mm	Chip Surfer T08	11.600 mm	11.600 mm	80.00 mm	60000
S025T10SA250	25.000 mm	Chip Surfer T10	8.460 mm	15.200 mm	250.00 mm	11130
NEW S032T10SA080	32.000 mm	Chip Surfer T10	14.500 mm	15.300 mm	80.00 mm	60000
NEW S032T12SA080	32.000 mm	Chip Surfer T12	11.900 mm	18.300 mm	80.00 mm	60000
NEW S040T15SA100	40.000 mm	Chip Surfer T15	13.940 mm	23.900 mm	100.00 mm	60000
NEW S040T21SA100	40.000 mm	Chip Surfer T21	8.660 mm	30.000 mm	100.00 mm	60000

W*T*SA - Steel Weldon, Necked **EXPANSION!**



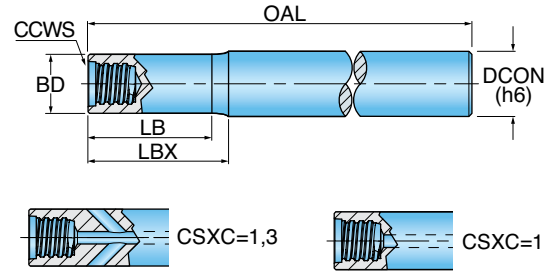
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LPR Protruding Length	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH									
WB050T05SA-00	0.500	Chip Surfer T05	0.174	0.400	2.185	0.299	0	0	60000
WB062T06SA-00	0.625	Chip Surfer T06	0.226	0.650	2.559	0.364	0	0	60000
WB062T08SA-00	0.625	Chip Surfer T08	0.125	0.650	2.559	0.480	0	0	60000
WB075T10SA-00	0.750	Chip Surfer T10	0.128	0.760	2.756	0.602	0	0	60000
WB100T12SA-00	1.000	Chip Surfer T12	0.287	0.750	3.000	0.720	0	0	60000
WB125T15SA-00	1.250	Chip Surfer T15	0.354	1.750	4.000	0.940	0	0	60000
METRIC									
NEW S012T05SA055	12.00 mm	Chip Surfer T05	3.81 mm	10.00 mm	55.00 mm	7.60 mm	0	0	60000
NEW S016T06SA065	16.00 mm	Chip Surfer T06	5.63 mm	19.00 mm	65.00 mm	9.60 mm	0	0	60000
NEW S016T08SA065	16.00 mm	Chip Surfer T08	3.90 mm	19.00 mm	65.00 mm	11.60 mm	0	0	60000
NEW S020T10SA070	20.00 mm	Chip Surfer T10	3.82 mm	23.00 mm	70.00 mm	15.30 mm	0	0	60000
NEW S025T12SA075	25.00 mm	Chip Surfer T12	7.19 mm	20.00 mm	75.00 mm	18.30 mm	0	0	60000
S032T15SA009	32.00 mm	Chip Surfer T15	7.00 mm	40.00 mm	100.00 mm	23.90 mm	0	0	60000
NEW S032T21DA100	32.00 mm	Chip Surfer T21	1.73 mm	40.00 mm	100.00 mm	30.00 mm	1	1	12690

S*T*CA - Carbide Shank, Necked EXPANSION!



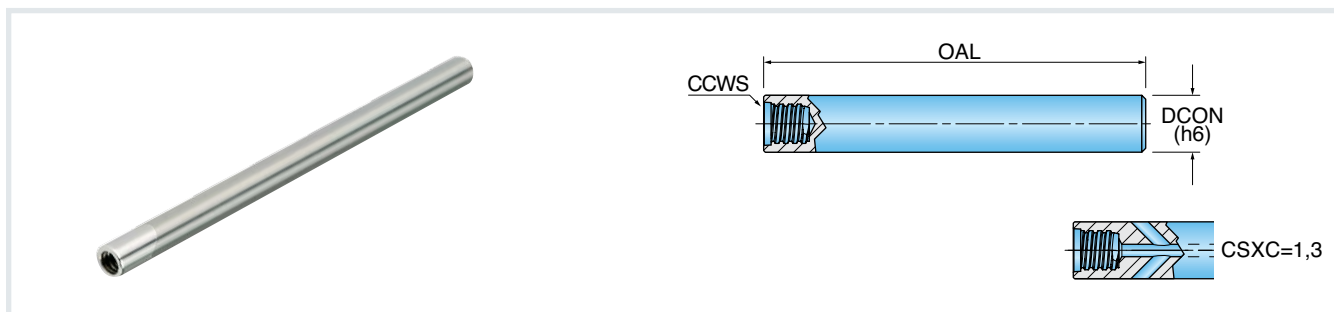
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH									
S031T05CA-09	0.313	Chip Surfer T05	0.950	1.000	3.000	0.300	0	0	60000
S031T05CA-19	0.313	Chip Surfer T05	1.950	2.000	4.000	0.300	0	0	40000
NEW S031T05CA-25	0.313	Chip Surfer T05	0.910	0.960	2.500	0.299	0	0	22650
NEW S031T05CA-35	0.313	Chip Surfer T05	1.450	1.500	3.500	0.299	0	0	50160
S037T06CA-12	0.375	Chip Surfer T06	1.200	1.300	4.000	0.364	0	0	50000
S037T06CA-12-01	0.375	Chip Surfer T06	1.200	1.270	4.000	0.364	1	1	47670
S037T06CA-20	0.375	Chip Surfer T06	1.950	2.000	4.750	0.364	0	0	34530
S050T08CA-15	0.500	Chip Surfer T08	1.400	1.500	4.000	0.480	0	0	42000
S050T08CA-15-01	0.500	Chip Surfer T08	1.500	1.580	4.500	0.480	s	1	42000
S050T08CA-151	0.500	Chip Surfer T08	1.400	1.500	4.000	0.455	0	0	42000
S050T08CA-25	0.500	Chip Surfer T08	2.450	2.500	5.500	0.480	0	0	27960
S050T08CA-25-01	0.500	Chip Surfer T08	2.430	2.500	5.500	0.480	1	1	27960
S050T08CA-251	0.500	Chip Surfer T08	2.450	2.500	5.500	0.455	0	0	27960
NEW S050T08CA-35	0.500	Chip Surfer T08	1.420	1.470	3.500	0.480	0	0	60000
NEW S062T10CA-11	0.625	Chip Surfer T10	1.180	1.250	3.250	0.602	0	0	60000
S062T10CA-14	0.625	Chip Surfer T10	1.400	1.500	4.000	0.553	0	0	35730
NEW S062T10CA-19	0.625	Chip Surfer T10	1.930	2.000	4.000	0.602	0	0	35730
S062T10CA-20-01	0.625	Chip Surfer T10	2.000	2.090	5.000	0.600	1	1	35730
S062T10CA-24	0.625	Chip Surfer T10	2.430	2.500	4.500	0.600	0	0	47010
S062T10CA-34	0.625	Chip Surfer T10	3.430	3.500	5.500	0.600	0	0	33510
S062T10CA-49	0.625	Chip Surfer T10	4.930	5.000	7.000	0.600	0	0	22000
S075T12CA-14	0.750	Chip Surfer T12	1.430	1.500	4.000	0.720	0	0	50000
S075T12CA-25-01	0.750	Chip Surfer T12	2.500	2.590	5.500	0.720	1	1	39480
S075T12CA-29	0.750	Chip Surfer T12	2.930	3.000	5.500	0.720	0	0	42360
NEW S075T12CA-38	0.750	Chip Surfer T12	3.860	3.900	6.700	0.720	0	0	25170
S075T12CA-44	0.750	Chip Surfer T12	4.430	4.500	8.000	0.720	0	0	17790
S100T15CA-10	1.000	Chip Surfer T15	5.900	6.000	10.000	0.940	0	0	12690
S100T15CA-24	1.000	Chip Surfer T15	2.400	2.500	5.000	0.940	0	0	42360
NEW S100T15CA-25	1.000	Chip Surfer T15	2.500	2.620	5.000	0.940	0	0	29820
S100T15CA-25-01	1.000	Chip Surfer T15	2.500	2.620	7.000	0.940	1	1	19740
S100T15CA-39	1.000	Chip Surfer T15	3.870	4.000	7.000	0.940	0	0	27300
S100T15CA-70-01	1.000	Chip Surfer T15	7.050	7.150	9.550	0.940	1	1	12000
S125T21CA-25	1.250	Chip Surfer T21	2.500	2.630	5.000	1.181	0	0	12690
S125T21CA-40	1.250	Chip Surfer T21	4.000	4.130	7.000	1.181	0	0	12690
NEW S125T21CA-40-01	1.250	Chip Surfer T21	4.000	4.130	7.000	1.181	1	1	12690
NEW S125T21CA-53	1.250	Chip Surfer T21	2.500	2.630	5.300	1.181	0	0	19740
S125T21CA-80	1.250	Chip Surfer T21	8.000	8.130	11.000	1.181	0	0	12690

S*T*CA - Carbide Shank, Necked EXPANSION!



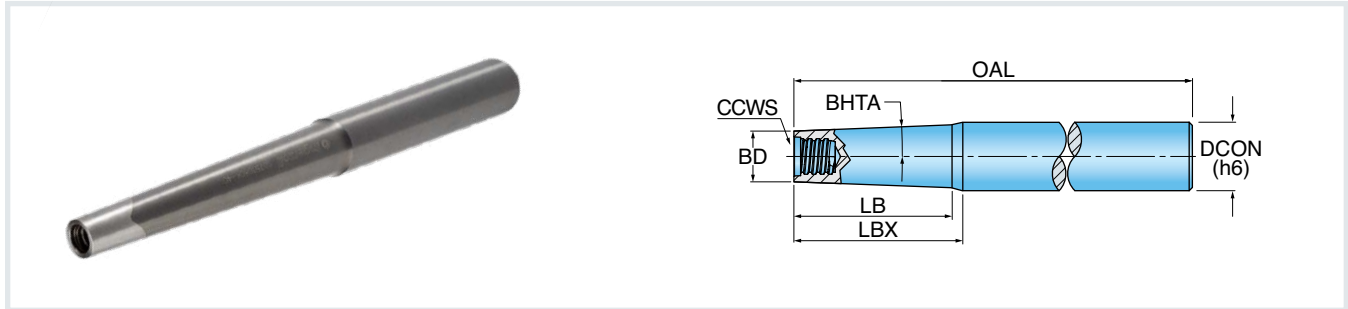
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
METRIC									
S008T05CA020	8.00 mm	Chip Surfer T05	18.60 mm	20.00 mm	70.00 mm	7.60 mm	0	0	60000
S008T05CA040	8.00 mm	Chip Surfer T05	38.60 mm	40.00 mm	90.00 mm	7.60 mm	0	0	50160
S008T05CA060	8.00 mm	Chip Surfer T05	58.00 mm	60.00 mm	110.00 mm	7.60 mm	0	0	30600
S010T06CA020	10.00 mm	Chip Surfer T06	18.50 mm	20.00 mm	70.00 mm	9.60 mm	0	0	54900
S010T06CA040	10.00 mm	Chip Surfer T06	38.50 mm	40.00 mm	90.00 mm	9.60 mm	0	0	55170
S010T06CA040-01	10.00 mm	Chip Surfer T06	38.50 mm	40.00 mm	90.00 mm	9.60 mm	1	1, 3	60000
S010T06CA060	10.00 mm	Chip Surfer T06	58.00 mm	60.00 mm	110.00 mm	9.60 mm	0	0	34530
S010T06CA100	10.00 mm	Chip Surfer T06	98.50 mm	100.00 mm	150.00 mm	9.60 mm	0	0	16620
S012T08CA020	12.00 mm	Chip Surfer T08	18.00 mm	20.00 mm	70.00 mm	11.60 mm	0	0	60000
S012T08CA020-02	12.00 mm	Chip Surfer T08	18.00 mm	20.00 mm	70.00 mm	11.50 mm	1	1, 3	43050
NEW S012T08CA035	12.00 mm	Chip Surfer T08	36.00 mm	37.70 mm	85.00 mm	11.60 mm	0	0	60000
S012T08CA040	12.00 mm	Chip Surfer T08	39.00 mm	40.00 mm	90.00 mm	11.60 mm	0	0	43050
S012T08CA040-02	12.00 mm	Chip Surfer T08	38.00 mm	40.00 mm	90.00 mm	11.50 mm	1	1	49800
S012T08CA060	12.00 mm	Chip Surfer T08	57.00 mm	60.00 mm	110.00 mm	11.60 mm	0	0	41040
S012T08CA060-01	12.00 mm	Chip Surfer T08	59.00 mm	60.00 mm	110.00 mm	11.50 mm	1	1	30210
S012T08CA080	12.00 mm	Chip Surfer T08	78.50 mm	80.00 mm	130.00 mm	11.60 mm	0	0	27960
S012T08CA080-01	12.00 mm	Chip Surfer T08	79.00 mm	80.00 mm	130.00 mm	11.50 mm	1	1	20100
S016T10CA040	16.00 mm	Chip Surfer T10	38.00 mm	40.00 mm	90.00 mm	15.30 mm	0	0	60000
S016T10CA040-03	16.00 mm	Chip Surfer T10	38.00 mm	40.00 mm	90.00 mm	15.30 mm	1	1	57510
NEW S016T10CA048	16.00 mm	Chip Surfer T10	48.00 mm	50.30 mm	100.00 mm	15.30 mm	0	0	38040
S016T10CA060	16.00 mm	Chip Surfer T10	58.00 mm	60.00 mm	110.00 mm	15.30 mm	0	0	47010
NEW S016T10CA060-01	16.00 mm	Chip Surfer T10	58.10 mm	60.00 mm	110.00 mm	15.30 mm	1	1, 3	60000
S016T10CA060-02	16.00 mm	Chip Surfer T10	59.00 mm	60.00 mm	110.00 mm	15.30 mm	1	1	36030
S016T10CA080	16.00 mm	Chip Surfer T10	77.50 mm	80.00 mm	130.00 mm	15.30 mm	0	0	33510
NEW S016T10CA080-01	16.00 mm	Chip Surfer T10	78.00 mm	80.00 mm	130.00 mm	15.30 mm	1	1	24450
S016T10CA100	16.00 mm	Chip Surfer T10	97.50 mm	100.00 mm	150.00 mm	15.30 mm	0	0	24660
S020T12CA040	20.00 mm	Chip Surfer T12	37.00 mm	40.00 mm	90.00 mm	18.30 mm	0	0	60000
S020T12CA040-01	20.00 mm	Chip Surfer T12	37.00 mm	40.00 mm	90.00 mm	18.30 mm	1	1	60000
S020T12CA080	20.00 mm	Chip Surfer T12	77.00 mm	80.00 mm	130.00 mm	18.30 mm	0	0	42360
S020T12CA080-01	20.00 mm	Chip Surfer T12	79.00 mm	80.00 mm	130.00 mm	18.30 mm	1	1	42360
NEW S020T12CA097	20.00 mm	Chip Surfer T12	97.20 mm	100.00 mm	170.00 mm	18.30 mm	0	0	25170
S020T12CA120	20.00 mm	Chip Surfer T12	116.50 mm	120.00 mm	200.00 mm	18.30 mm	0	0	17790
S020T12CA120-01	20.00 mm	Chip Surfer T12	119.00 mm	120.00 mm	200.00 mm	18.30 mm	1	1	17790
S025T15CA060	25.00 mm	Chip Surfer T15	57.50 mm	60.00 mm	120.00 mm	23.90 mm	0	0	49400
NEW S025T15CA063	25.00 mm	Chip Surfer T15	63.00 mm	65.80 mm	125.00 mm	24.00 mm	0	0	41700
S025T15CA100	25.00 mm	Chip Surfer T15	98.00 mm	100.00 mm	170.00 mm	23.90 mm	0	0	27360
S025T15CA150	25.00 mm	Chip Surfer T15	148.00 mm	150.00 mm	250.00 mm	23.90 mm	0	0	12690
NEW S032T21CA060	32.00 mm	Chip Surfer T21	60.00 mm	63.30 mm	130.00 mm	30.00 mm	0	0	12690
NEW S032T21CA064	32.00 mm	Chip Surfer T21	64.00 mm	67.50 mm	135.00 mm	30.00 mm	0	0	12690
NEW S032T21CA100	32.00 mm	Chip Surfer T21	100.00 mm	103.50 mm	170.00 mm	30.00 mm	0	0	12690
NEW S032T21CA100-01	32.00 mm	Chip Surfer T21	100.00 mm	103.50 mm	170.00 mm	30.00 mm	1	1	12690
NEW S032T21CA150	32.00 mm	Chip Surfer T21	150.00 mm	153.50 mm	250.00 mm	30.00 mm	0	0	12690
NEW S032T21CA200	32.00 mm	Chip Surfer T21	200.00 mm	203.50 mm	300.00 mm	30.00 mm	0	0	12690

S*T*CA - Carbide Shank, No Neck



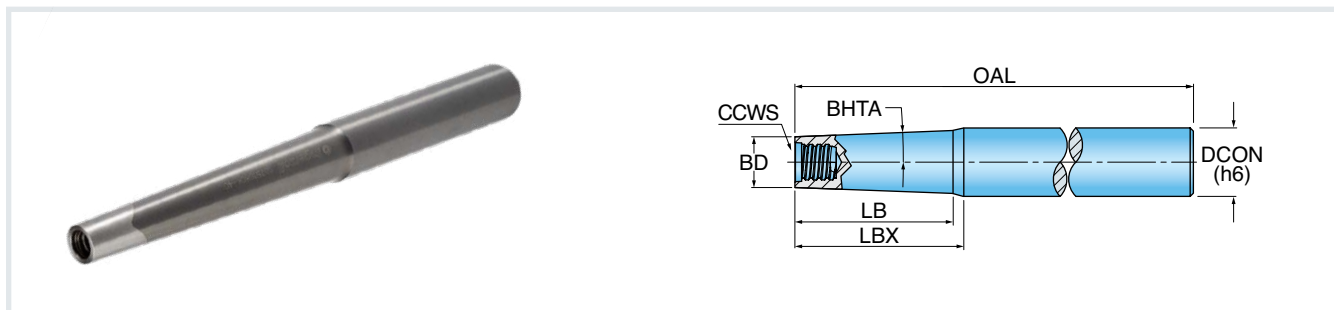
Part Number	CCWS Conection Code Workpiece Side	OAL Overall Length	DCON Shank Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH						
S009T06CA064	Chip Surfer T06	3.150	0.375	0	0	50000
S031T05CA-40	Chip Surfer T05	4.000	0.313	0	0	55000
S031T05CA-65	Chip Surfer T05	6.500	0.313	0	0	17500
S037T06CA-40	Chip Surfer T06	4.000	0.375	0	0	40756
S037T06CA-70	Chip Surfer T06	7.000	0.375	0	0	17280
S050T08CA-40	Chip Surfer T08	4.000	0.500	0	0	47796
S050T08CA-75	Chip Surfer T08	7.500	0.500	0	0	18230
S062T10CA-40	Chip Surfer T10	4.000	0.625	0	0	54084
S062T10CA-80	Chip Surfer T10	8.000	0.625	0	0	18685
S075T12CA-40	Chip Surfer T12	4.000	0.750	0	0	60000
S075T12CA-80	Chip Surfer T12	8.000	0.750	0	0	20671
S100T15CA-11	Chip Surfer T15	11.000	1.000	0	0	14877
S100T15CA-60	Chip Surfer T15	6.000	1.000	0	0	37682
METRIC						
S010T06CA064	Chip Surfer T06	100.00 mm	10.000 mm	0	0	50000
S012T08CA078	Chip Surfer T08	100.00 mm	12.000 mm	1	1, 3	60000

S*T*CK - Carbide Shank, Cone Neck EXPANSION!



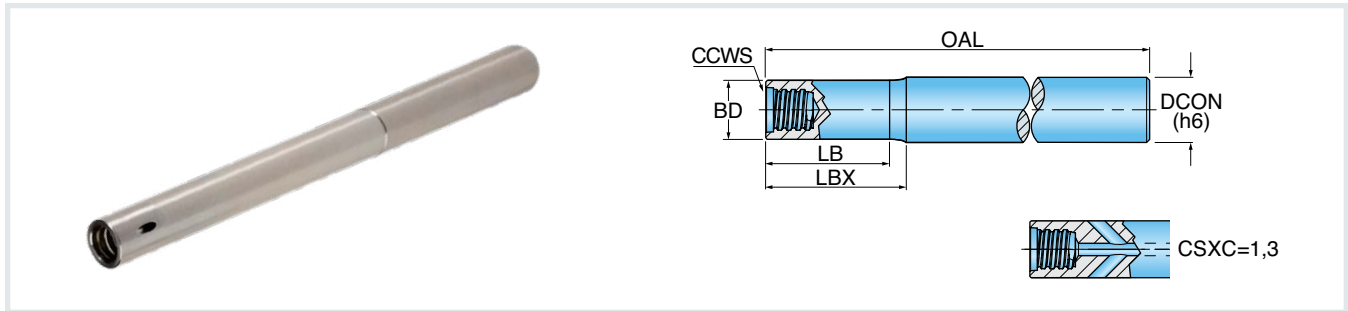
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	RPMX RPM Max.
INCH								
S037T05CK-15	0.375	Chip Surfer T05	1.500	1.500	3.500	0.300	1.0	55000
NEW S050T05CK-25	0.500	Chip Surfer T05	2.354	2.500	4.500	0.299	1.0	53430
S050T06CK-25	0.500	Chip Surfer T06	2.440	2.500	5.500	0.364	1.0	32000
S062T05CA-52	0.625	Chip Surfer T05	1.550	1.550	5.250	0.300	6.0	33210
S062T05CK-39	0.625	Chip Surfer T05	3.670	4.000	6.000	0.300	1.0	28000
S062T06CA-65	0.625	Chip Surfer T06	1.240	1.240	5.250	0.364	6.0	32645
S062T06CK-35	0.625	Chip Surfer T06	3.300	3.500	6.500	0.364	1.0	26000
S062T08CK-35	0.625	Chip Surfer T08	3.440	3.500	6.500	0.480	1.0	29000
S075T08CA-57	0.750	Chip Surfer T08	1.280	1.280	5.750	0.480	6.0	31252
S075T08CK-40	0.750	Chip Surfer T08	3.900	4.000	7.000	0.480	1.0	26200
S075T10CK-40	0.750	Chip Surfer T10	4.000	4.000	6.500	0.600	1.0	26000
S075T10CK-62	0.750	Chip Surfer T10	6.240	6.300	8.800	0.600	1.0	18000
S100T12CK-55	1.000	Chip Surfer T12	5.350	5.500	10.000	0.720	1.0	16000
S125T15CK-50	1.250	Chip Surfer T15	4.800	5.000	8.000	0.940	1.0	17000
S125T15CK-80	1.250	Chip Surfer T15	8.000	8.000	12.000	0.940	1.0	14397

S*T*CK - Carbide Shank, Cone Neck



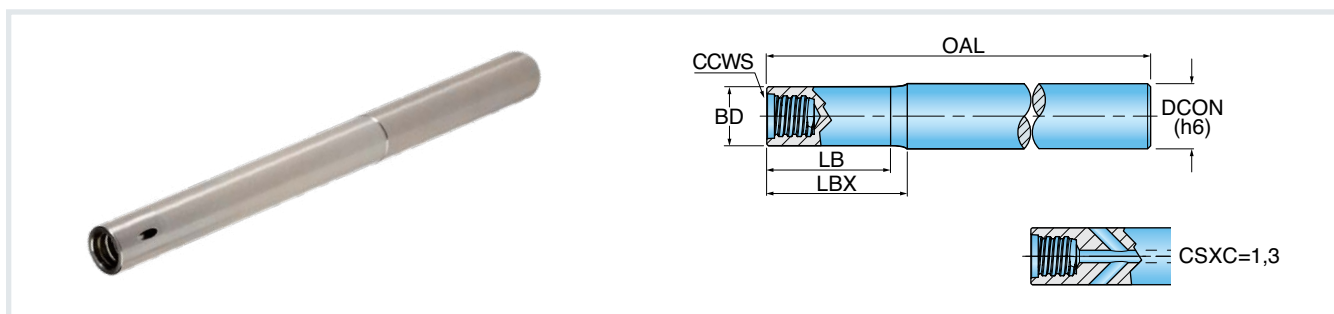
Part Number	DCON Shank Dia.	CCWS Connection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	RPMX RPM Max.
METRIC								
S012T05CK060	12.00 mm	Chip Surfer T05	55.90 mm	60.00 mm	110.00 mm	7.60 mm	1.5	53430
S012T05CK080	12.00 mm	Chip Surfer T05	77.30 mm	80.00 mm	130.00 mm	7.60 mm	1.0	36420
S012T06CK060	12.00 mm	Chip Surfer T06	57.00 mm	60.00 mm	110.00 mm	9.60 mm	1.5	53430
S016T05CK100	16.00 mm	Chip Surfer T05	91.50 mm	100.00 mm	150.00 mm	7.60 mm	1.5	29700
S016T06CK080	16.00 mm	Chip Surfer T06	77.00 mm	80.00 mm	130.00 mm	9.60 mm	1.5	29700
S016T06CK100	16.00 mm	Chip Surfer T06	95.50 mm	100.00 mm	150.00 mm	9.60 mm	1.5	30150
S016T06CK120	16.00 mm	Chip Surfer T06	117.00 mm	120.00 mm	170.00 mm	9.60 mm	1.5	23400
S016T08CK080	16.00 mm	Chip Surfer T08	77.00 mm	80.00 mm	130.00 mm	11.60 mm	1.5	39870
S016T08CK100	16.00 mm	Chip Surfer T08	98.00 mm	100.00 mm	150.00 mm	11.60 mm	1.3	29970
S020T08CK120	20.00 mm	Chip Surfer T08	112.00 mm	120.00 mm	170.00 mm	11.60 mm	1.5	26250
S020T10CK100	20.00 mm	Chip Surfer T10	97.50 mm	100.00 mm	150.00 mm	15.30 mm	1.4	35610
S020T10CK120	20.00 mm	Chip Surfer T10	119.00 mm	120.00 mm	170.00 mm	15.30 mm	1.1	28140
S020T10CK140	20.00 mm	Chip Surfer T10	139.00 mm	140.00 mm	190.00 mm	15.30 mm	1.0	22830
S020T10CK160	20.00 mm	Chip Surfer T10	159.00 mm	160.00 mm	210.00 mm	15.30 mm	1.0	18270
S025T12CK120	25.00 mm	Chip Surfer T12	116.00 mm	120.00 mm	180.00 mm	18.30 mm	1.6	29460
S025T12CK140	25.00 mm	Chip Surfer T12	136.00 mm	140.00 mm	250.00 mm	18.30 mm	1.4	16170
S032T15CK150	32.00 mm	Chip Surfer T15	144.00 mm	150.00 mm	250.00 mm	23.90 mm	3.1	20370
S032T15CK200	32.00 mm	Chip Surfer T15	196.00 mm	200.00 mm	300.00 mm	23.90 mm	2.3	16000

S*T*HA - Heavy Metal Shank, Necked EXPANSION!



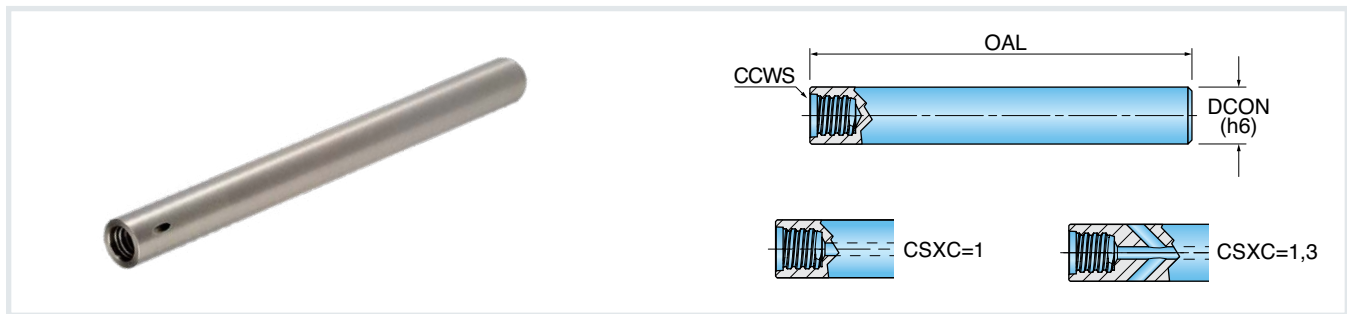
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH									
NEW S031T05HA-10	0.313	Chip Surfer T05	0.980	1.000	3.000	0.299	0	0	60000
NEW S031T05HA-09	0.313	Chip Surfer T05	1.949	2.000	4.000	0.299	0	0	22650
NEW S037T06HA-08	0.375	Chip Surfer T06	0.680	0.800	3.550	0.364	0	0	41670
NEW S037T06HA-10-01	0.375	Chip Surfer T06	0.980	1.000	3.000	0.364	1	1, 3	47670
NEW S037T06HA-20-01	0.375	Chip Surfer T06	1.980	2.000	4.000	0.364	1	1, 3	24420
NEW S050T08HA-06	0.500	Chip Surfer T08	0.530	0.600	4.250	0.480	0	0	31350
NEW S050T08HA-10-01	0.500	Chip Surfer T08	0.966	1.000	3.000	0.480	1	1, 3	60000
NEW S050T08HA-30-01	0.500	Chip Surfer T08	2.966	3.000	5.000	0.480	1	1, 3	20610
NEW S062T10HA-10-01	0.625	Chip Surfer T10	0.954	1.000	3.000	0.602	1	1, 3	60000
NEW S062T10HA-20-01	0.625	Chip Surfer T10	1.954	2.000	4.000	0.602	1	1, 3	35730
NEW S062T10HA-40-01	0.625	Chip Surfer T10	3.954	4.000	6.000	0.602	1	1, 3	15030
NEW S075T12HA-20-01	0.750	Chip Surfer T12	1.925	2.000	4.000	0.720	1	1, 3	39480
NEW S075T12HA-50-01	0.750	Chip Surfer T12	4.925	5.000	8.000	0.720	1	1, 3	29820
NEW S100T15HA-20-01	1.000	Chip Surfer T15	1.909	2.000	5.000	0.940	1	1, 3	29820

S*T*HA - Heavy Metal Shank, Necked EXPANSION!



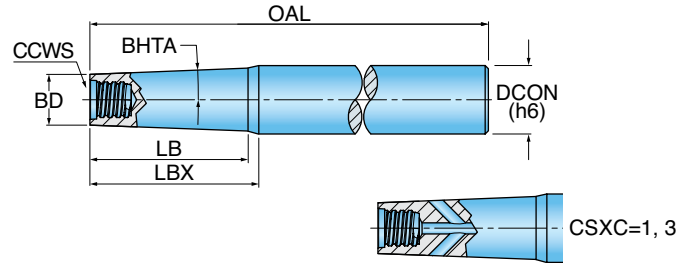
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BD2 Body Dia. 2	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
METRIC										
S008T05HA020	8.00 mm	Chip Surfer T05	19.00 mm	20.00 mm	70.00 mm	7.60 mm	No	0	0	60000
S008T05HA040	8.00 mm	Chip Surfer T05	39.00 mm	40.00 mm	90.00 mm	7.60 mm	No	0	0	36090
S008T05HA060	8.00 mm	Chip Surfer T05	59.00 mm	60.00 mm	110.00 mm	7.60 mm	No	0	0	21060
NEW S010T06HA017	10.00 mm	Chip Surfer T06	17.20 mm	20.00 mm	90.00 mm	9.60 mm	No	0	0	41670
S010T06HA020	10.00 mm	Chip Surfer T06	19.00 mm	20.00 mm	70.00 mm	9.60 mm	Yes	1	1, 3	60000
S010T06HA040	10.00 mm	Chip Surfer T06	39.00 mm	40.00 mm	90.00 mm	9.60 mm	Yes	1	1, 3	40860
S010T06HA060	10.00 mm	Chip Surfer T06	59.00 mm	60.00 mm	110.00 mm	9.60 mm	Yes	1	1, 3	24840
NEW S012T08HA017	12.00 mm	Chip Surfer T08	17.00 mm	20.00 mm	110.00 mm	11.60 mm	No	0	0	31350
S012T08HA020	12.00 mm	Chip Surfer T08	19.00 mm	20.00 mm	70.00 mm	11.50 mm	Yes	1	1, 3	60000
S012T08HA040	12.00 mm	Chip Surfer T08	39.00 mm	40.00 mm	90.00 mm	11.50 mm	Yes	1	1, 3	49800
S012T08HA060	12.00 mm	Chip Surfer T08	59.00 mm	60.00 mm	110.00 mm	11.50 mm	Yes	1	1, 3	30210
S012T08HA080	12.00 mm	Chip Surfer T08	79.00 mm	80.00 mm	130.00 mm	11.50 mm	Yes	1	1, 3	20100
NEW S016T10HA020	16.00 mm	Chip Surfer T10	18.20 mm	20.00 mm	70.00 mm	15.30 mm	Yes	1	1, 3	60000
S016T10HA040	16.00 mm	Chip Surfer T10	38.00 mm	40.00 mm	90.00 mm	15.20 mm	Yes	1	1, 3	57510
S016T10HA060	16.00 mm	Chip Surfer T10	58.00 mm	60.00 mm	110.00 mm	15.20 mm	Yes	1	1, 3	36030
S016T10HA080	16.00 mm	Chip Surfer T10	79.00 mm	80.00 mm	130.00 mm	15.20 mm	Yes	1	1, 3	24450
S016T10HA100	16.00 mm	Chip Surfer T10	99.00 mm	100.00 mm	150.00 mm	15.20 mm	Yes	1	1, 3	17610
S020T12HA040	20.00 mm	Chip Surfer T12	37.00 mm	40.00 mm	90.00 mm	18.30 mm	Yes	1	1, 3	60000
S020T12HA080	20.00 mm	Chip Surfer T12	77.00 mm	80.00 mm	130.00 mm	18.30 mm	Yes	1	1, 3	31650
S020T12HA120	20.00 mm	Chip Surfer T12	117.00 mm	120.00 mm	200.00 mm	18.30 mm	Yes	1	1, 3	12540
NEW S025T15HA58	25.00 mm	Chip Surfer T15	58.00 mm	60.00 mm	120.00 mm	23.90 mm	Yes	1	1, 3	41700

S*T*HA - Heavy Metal Shank, No Neck



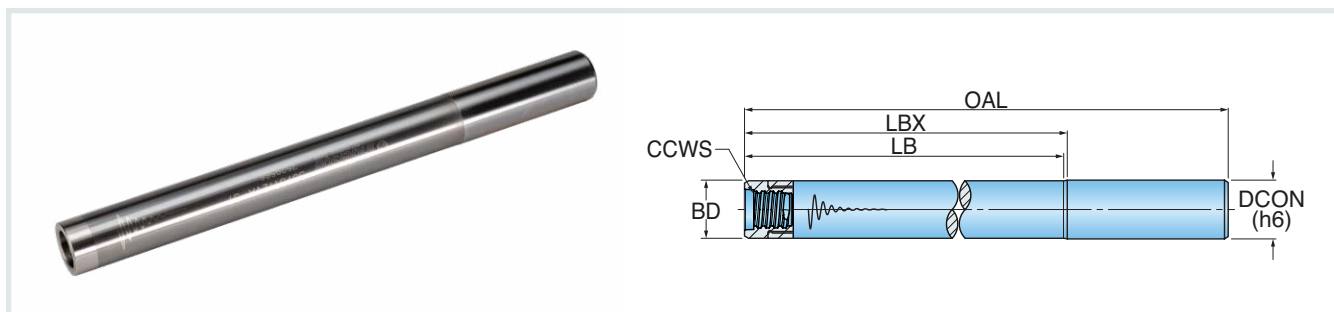
Part Number	CCWS Connection Code Workpiece Side	OAL Overall Length	DCON Shank Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH						
S031T05HA-35	Chip Surfer T05	3.500	0.313	1	1	60000
S037T06HA-45	Chip Surfer T06	4.500	0.375	1	1, 3	60000
S037T06HA-45-01	Chip Surfer T06	4.500	0.375	1	1	15677
S050T08HA-55	Chip Surfer T08	5.500	0.500	1	1, 3	14633
S050T08HA-56-01	Chip Surfer T08	5.500	0.500	1	1	13226
S062T10HA-65	Chip Surfer T10	6.500	0.625	1	1, 3	12540
S062T10HA-65-01	Chip Surfer T10	6.500	0.625	1	1	11334
S075T12HA-75	Chip Surfer T12	7.500	0.750	1	1, 3	10912
S075T12HA-75-01	Chip Surfer T12	7.500	0.750	1	1	9862

S*T*HK - Heavy Metal, Cone Neck EXPANSION!



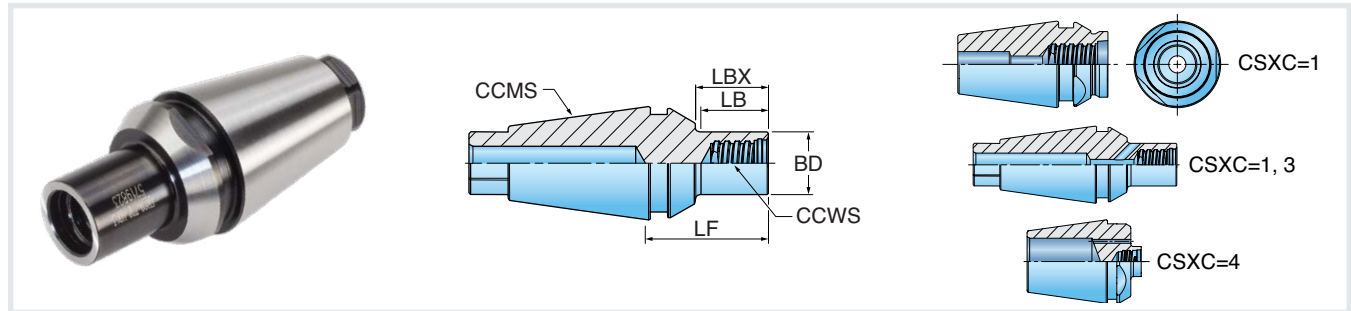
Part Number	DCON Shank Dia.	CCWS Conetion Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BHTA Body Half Taper Angle	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	RPMX RPM Max.
INCH										
NEW S062T06HK-21	0.625	Chip Surfer T06	1.765	2.180	6.700	0.364	1.0	0	0	18000
NEW S075T06HK-22	0.750	Chip Surfer T06	2.240	2.240	5.500	0.364	5.0	0	0	51180
NEW S075T08HK-31	0.750	Chip Surfer T08	2.770	3.150	6.700	0.480	1.0	0	0	24900
METRIC										
S012T05HK060	12.00 mm	Chip Surfer T05	56.50 mm	60.00 mm	110.00 mm	7.60 mm	1.0	1	1, 3	38460
S012T05HK080	12.00 mm	Chip Surfer T05	77.30 mm	80.00 mm	130.00 mm	7.60 mm	1.0	1	1, 3	26160
S012T06HK060	12.00 mm	Chip Surfer T06	59.40 mm	60.00 mm	110.00 mm	9.60 mm	1.0	1	1, 3	36990
NEW S016T06HK045	16.00 mm	Chip Surfer T06	46.30 mm	55.00 mm	170.00 mm	9.60 mm	1.0	0	0	21210
S016T06HK080	16.00 mm	Chip Surfer T06	74.30 mm	80.00 mm	130.00 mm	9.60 mm	1.0	1	1, 3	29490
S016T06HK100	16.00 mm	Chip Surfer T06	94.80 mm	100.00 mm	150.00 mm	9.60 mm	1.0	1	1, 3	21660
S016T08HK080	16.00 mm	Chip Surfer T08	77.30 mm	80.00 mm	130.00 mm	11.60 mm	1.0	1	1, 3	29040
S016T08HK100	16.00 mm	Chip Surfer T08	98.40 mm	100.00 mm	150.00 mm	11.60 mm	1.0	1	1, 3	21540
NEW S020T06HK060	20.00 mm	Chip Surfer T06	60.30 mm	60.30 mm	140.50 mm	9.65 mm	5.0	0	0	51180
S020T08HK080	20.00 mm	Chip Surfer T08	69.70 mm	80.00 mm	170.00 mm	11.60 mm	1.0	0	0	24900
S020T08HK120	20.00 mm	Chip Surfer T08	113.00 mm	120.00 mm	170.00 mm	11.60 mm	1.0	1	1, 3	18750
S020T10HK100	20.00 mm	Chip Surfer T10	96.80 mm	100.00 mm	150.00 mm	15.30 mm	1.0	1	1, 3	25800
S020T10HK120	20.00 mm	Chip Surfer T10	118.00 mm	120.00 mm	170.00 mm	15.30 mm	1.0	1	1, 3	20100
S020T10HK140	20.00 mm	Chip Surfer T10	140.00 mm	140.00 mm	190.00 mm	15.30 mm	1.0	1	1, 3	16170
S020T10HK160	20.00 mm	Chip Surfer T10	160.00 mm	160.00 mm	210.00 mm	15.30 mm	1.0	1	1, 3	12870
S025T12HK120	25.00 mm	Chip Surfer T12	115.70 mm	120.00 mm	180.00 mm	18.30 mm	1.0	1	1, 3	20940
NEW S025T12HK140	25.00 mm	Chip Surfer T12	135.60 mm	140.00 mm	250.00 mm	18.30 mm	1.0	1	1, 3	11300
NEW S025T12HK140-01	25.00 mm	Chip Surfer T12	146.60 mm	150.00 mm	200.00 mm	18.30 mm	1.0	1	1, 3	16560
S025T12HK160-01	25.00 mm	Chip Surfer T12	158.20 mm	160.00 mm	250.00 mm	18.30 mm	1.0	1	1, 3	11310

S*T*VA - Anti Vibe Shank, (Carbide with Core), Necked NEW



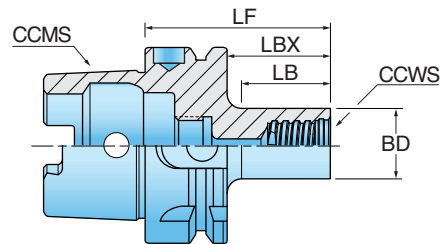
Part Number	DCON Shank Dia.	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	OAL Overall Length	BD Body Dia.	BMC Body Material Code
INCH							
NEW S075T12VA-44	0.750	Chip Surfer T12	4.452	4.500	6.700	0.738	Carbide
NEW S075T12VA-57	0.750	Chip Surfer T12	5.751	5.799	8.000	0.738	Carbide
NEW S100T15VA-59	1.000	Chip Surfer T15	5.945	6.000	8.500	0.984	Carbide
NEW S100T15VA-74	1.000	Chip Surfer T15	7.445	7.500	10.000	0.984	Carbide
METRIC							
NEW S020T12VA120	20.00 mm	Chip Surfer T12	118.80 mm	120.00 mm	175.00 mm	19.70 mm	Carbide
NEW S020T12VA145	20.00 mm	Chip Surfer T12	143.60 mm	145.00 mm	200.00 mm	19.70 mm	Carbide
NEW S025T15VA150	25.00 mm	Chip Surfer T15	148.60 mm	150.00 mm	210.00 mm	24.60 mm	Carbide
NEW S025T15VA190	25.00 mm	Chip Surfer T15	188.60 mm	190.00 mm	250.00 mm	24.60 mm	Carbide

ER*T - Solid ER, Neck Relief



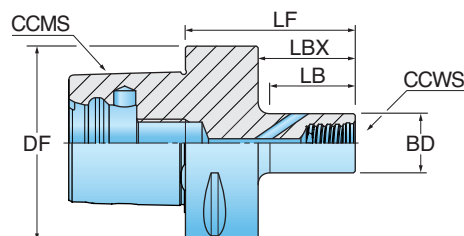
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	LF Functional Length	BD Body Dia.	OAL Overall Length	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone
INCH									
ER11T05SA-02	ER11	Chip Surfer T05	0.140	0.157	0.378	0.300	0.866	0	0
ER11T05SA-05	ER11	Chip Surfer T05	0.400	0.413	0.634	0.300	1.122	0	0
ER16T05SA-02	ER16	Chip Surfer T05	0.125	0.157	0.457	0.300	1.162	0	0
ER16T05SA-05	ER16	Chip Surfer T05	0.382	0.413	0.713	0.300	1.575	0	0
ER16T06SA-02	ER16	Chip Surfer T06	0.125	0.157	0.457	0.364	1.319	0	0
ER16T06SA-05	ER16	Chip Surfer T06	0.380	0.413	0.713	0.364	1.575	0	0
ER16T06SA-10	ER16	Chip Surfer T06	0.480	0.512	0.812	0.364	1.673	1	1, 3
ER16T08SA-02	ER16	Chip Surfer T08	0.125	0.158	0.457	0.457	1.162	0	0
ER16T08SA-06	ER16	Chip Surfer T08	0.480	0.512	0.812	0.457	1.673	0	0
ER20T05SA-02	ER20	Chip Surfer T05	0.125	0.157	0.496	0.300	1.398	1	4
ER20T05SA-05	ER20	Chip Surfer T05	0.380	0.413	0.752	0.300	1.654	1	4
ER20T06SA-02	ER20	Chip Surfer T06	0.125	0.157	0.496	0.364	1.398	1	4
ER20T06SA-05	ER20	Chip Surfer T06	0.380	0.413	0.752	0.364	1.654	0	0
ER20T08SA-02	ER20	Chip Surfer T08	0.125	0.157	0.496	0.457	1.398	1	4
ER20T08SA-06	ER20	Chip Surfer T08	0.480	0.512	0.851	0.457	1.752	1	4
ER20T10SA-02	ER20	Chip Surfer T10	0.125	0.157	0.496	0.600	1.398	1	1
ER20T10SA-07	ER20	Chip Surfer T10	0.600	0.630	0.969	0.600	1.870	0	0
ER25T05SA-02	ER25	Chip Surfer T05	0.125	0.157	0.516	0.300	1.496	1	4
ER25T05SA-05	ER25	Chip Surfer T05	0.380	0.413	0.772	0.300	1.752	1	4
ER25T06SA-02	ER25	Chip Surfer T06	0.125	0.157	0.516	0.364	1.496	1	4
ER25T06SA-05	ER25	Chip Surfer T06	0.380	0.413	0.772	0.364	1.752	1	4
ER25T08SA-02	ER25	Chip Surfer T08	0.125	0.157	0.516	0.457	1.496	1	4
ER25T08SA-05	ER25	Chip Surfer T08	0.380	0.413	0.772	0.457	1.752	1	4
ER25T10SA-02	ER25	Chip Surfer T10	0.125	0.157	0.516	0.600	1.496	1	4
ER25T10SA-05	ER25	Chip Surfer T10	0.380	0.413	0.772	0.600	1.752	1	4
ER25T12SA-02	ER25	Chip Surfer T12	0.125	0.157	0.516	0.720	1.496	1	1
ER25T12SA-05	ER25	Chip Surfer T12	0.380	0.413	0.772	0.720	1.752	1	1
ER32T05SA-02	ER32	Chip Surfer T05	0.140	0.157	0.555	0.300	1.732	1	4
ER32T05SA-10	ER32	Chip Surfer T05	0.780	0.984	1.382	0.300	2.559	1	1, 3
ER32T05SA-20	ER32	Chip Surfer T05	1.250	1.575	1.972	0.300	3.150	1	4
ER32T06SA-02	ER32	Chip Surfer T06	0.140	0.157	0.555	0.364	1.732	1	4
ER32T06SA-10	ER32	Chip Surfer T06	0.780	0.984	1.382	0.364	2.559	1	4
ER32T06SA-20	ER32	Chip Surfer T06	1.300	1.575	2.366	0.364	3.150	1	4
ER32T08SA-02	ER32	Chip Surfer T08	0.140	0.157	0.555	0.457	1.732	1	4
ER32T08SA-10	ER32	Chip Surfer T08	0.900	0.984	1.382	0.457	2.559	1	4
ER32T08SA-20	ER32	Chip Surfer T08	1.770	1.968	2.366	0.457	3.543	1	1, 3
ER32T10SA-02	ER32	Chip Surfer T10	0.140	0.157	0.555	0.600	1.732	1	4
ER32T10SA-10	ER32	Chip Surfer T10	0.900	0.984	1.382	0.600	2.559	1	4
ER32T10SA-20	ER32	Chip Surfer T10	1.850	1.968	2.366	0.600	3.543	1	1, 3
ER32T12SA-02	ER32	Chip Surfer T12	0.140	0.157	0.555	0.720	1.732	1	4
ER32T12SA-10	ER32	Chip Surfer T12	0.860	0.984	1.382	0.720	2.559	1	4
ER32T12SA-20	ER32	Chip Surfer T12	1.850	1.968	2.366	0.720	3.543	1	1, 3
ER32T15SA-02	ER32	Chip Surfer T15	0.140	0.157	0.555	0.940	1.732	1	4
ER32T15SA-10	ER32	Chip Surfer T15	0.950	0.984	1.382	0.940	2.559	1	1, 3
ER32T15SA-20	ER32	Chip Surfer T15	1.930	1.968	2.366	0.940	3.543	1	1, 3

HSKA*T



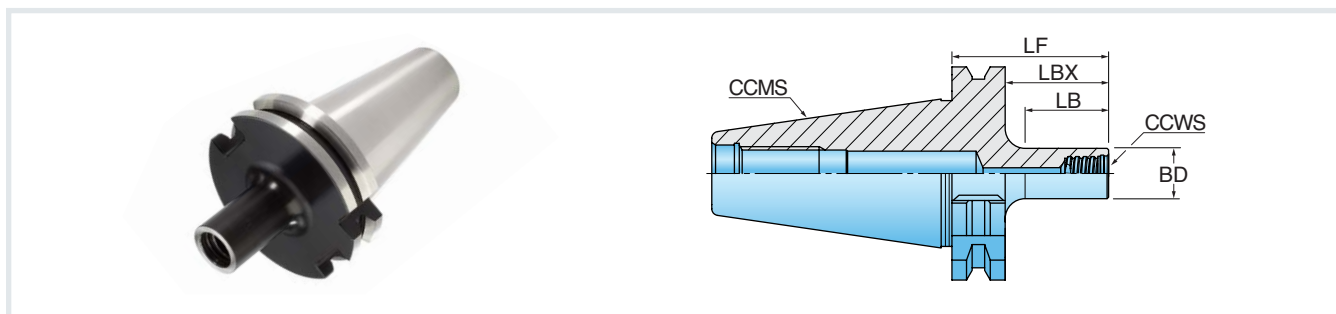
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	LF Functional Length	BD Body Dia.	DF Flange Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone
METRIC									
HSKA40T05X35	HSK A40	Chip Surfer T05	10.00 mm	15.00 mm	35.00 mm	7.60 mm	40.00 mm	1	1
HSKA40T06X40	HSK A40	Chip Surfer T06	15.00 mm	20.00 mm	40.00 mm	9.25 mm	40.00 mm	1	1
HSKA40T08X45	HSK A40	Chip Surfer T08	20.00 mm	25.00 mm	45.00 mm	11.60 mm	40.00 mm	1	1
HSKA40T10X50	HSK A40	Chip Surfer T10	25.00 mm	30.00 mm	50.00 mm	15.30 mm	40.00 mm	1	1
HSKA40T12X50	HSK A40	Chip Surfer T12	25.00 mm	30.00 mm	50.00 mm	18.30 mm	40.00 mm	1	1
HSKA63T06X50	HSK A63	Chip Surfer T06	18.00 mm	24.00 mm	50.00 mm	9.50 mm	63.00 mm	1	1
HSKA63T08X50	HSK A63	Chip Surfer T08	18.00 mm	24.00 mm	50.00 mm	11.50 mm	63.00 mm	1	1
HSKA63T10X55	HSK A63	Chip Surfer T10	23.00 mm	29.00 mm	55.00 mm	15.20 mm	63.00 mm	1	1
HSKA63T12X55	HSK A63	Chip Surfer T12	23.00 mm	29.00 mm	55.00 mm	18.30 mm	63.00 mm	1	1
HSKA63T15X60	HSK A63	Chip Surfer T15	28.00 mm	34.00 mm	60.00 mm	23.90 mm	63.00 mm	1	1

C*T



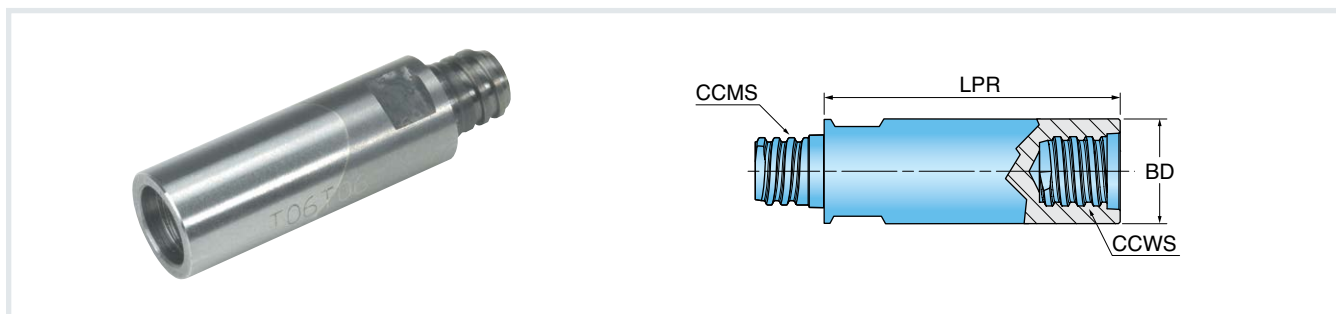
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	LF Functional Length	BD Body Dia.	DF Flange Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone
METRIC									
C3T05X35	C3	Chip Surfer T05	15.00 mm	20.00 mm	35.00 mm	7.60 mm	32.00 mm	1	1, 3
C3T06X35	C3	Chip Surfer T06	15.00 mm	20.00 mm	35.00 mm	9.25 mm	32.00 mm	1	1, 3
C3T08X40	C3	Chip Surfer T08	20.00 mm	25.00 mm	40.00 mm	11.60 mm	32.00 mm	1	1, 3
C3T10X40	C3	Chip Surfer T10	20.00 mm	25.00 mm	40.00 mm	15.30 mm	32.00 mm	1	1, 3
C3T12X45	C4	Chip Surfer T12	25.00 mm	30.00 mm	45.00 mm	18.30 mm	40.00 mm	1	1, 3
C4T06X45	C4	Chip Surfer T06	20.00 mm	25.00 mm	45.00 mm	9.25 mm	40.00 mm	1	1, 3
C4T08X45	C4	Chip Surfer T08	20.00 mm	25.00 mm	45.00 mm	11.60 mm	40.00 mm	1	1, 3
C4T10X50	C4	Chip Surfer T10	25.00 mm	30.00 mm	50.00 mm	15.30 mm	40.00 mm	1	1, 3
C4T12X55	C4	Chip Surfer T12	30.00 mm	35.00 mm	55.00 mm	18.30 mm	40.00 mm	1	1, 3
C4T15X55	C4	Chip Surfer T15	30.00 mm	35.00 mm	60.00 mm	23.90 mm	40.00 mm	1	1, 3
C5T10X60	C5	Chip Surfer T10	35.00 mm	40.00 mm	60.00 mm	15.30 mm	50.00 mm	1	1, 3
C5T12X60	C5	Chip Surfer T12	35.00 mm	40.00 mm	60.00 mm	18.30 mm	50.00 mm	1	1, 3
C5T15X60	C5	Chip Surfer T15	35.00 mm	40.00 mm	60.00 mm	23.90 mm	50.00 mm	1	1, 3
C6T12X65	C6	Chip Surfer T12	38.00 mm	43.00 mm	65.00 mm	18.30 mm	63.00 mm	1	1, 3
C6T15X65	C6	Chip Surfer T15	38.00 mm	43.00 mm	65.00 mm	23.90 mm	63.00 mm	1	1, 3
C8T15X70	C8	Chip Surfer T15	35.00 mm	40.00 mm	70.00 mm	23.90 mm	63.00 mm	1	1, 3

DIN69871*T



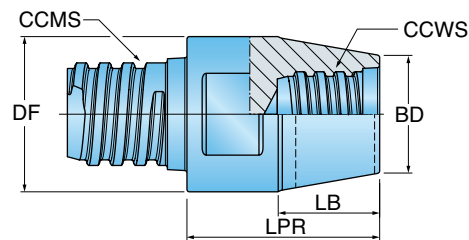
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LBX Body Length Max.	LF Functional Length	BD Body Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone
METRIC								
DIN6987140T06X40	DIN69871-40	Chip Surfer T06	15.00 mm	21.00 mm	40.00 mm	9.55 mm	1	1
DIN6987140T08X45	DIN69871-40	Chip Surfer T08	20.00 mm	26.00 mm	45.00 mm	11.50 mm	1	1
DIN6987140T10X50	DIN69871-40	Chip Surfer T10	25.00 mm	31.00 mm	50.00 mm	15.20 mm	1	1
DIN6987140T12X50	DIN69871-40	Chip Surfer T12	25.00 mm	31.00 mm	50.00 mm	18.30 mm	1	1
DIN6987140T15X50	DIN69871-40	Chip Surfer T15	25.00 mm	31.00 mm	50.00 mm	23.90 mm	1	1

T_T_SA - Extension



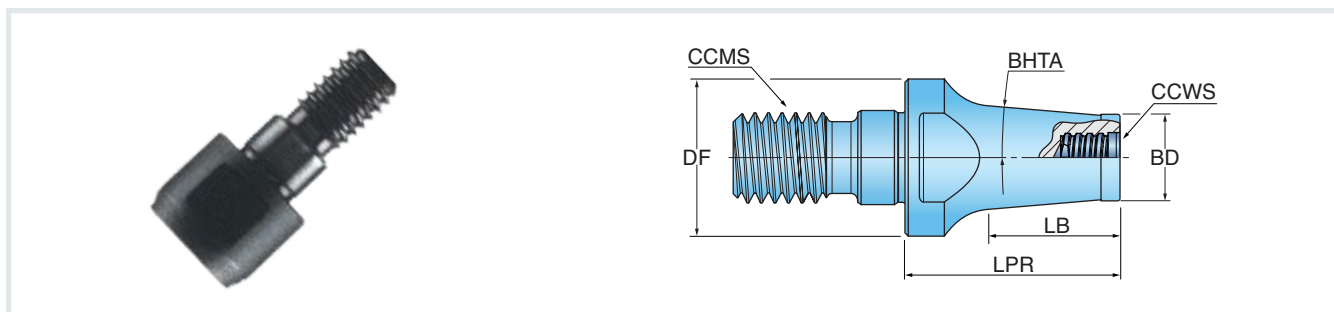
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LPR Protruding Length	BD Body Dia.	DRVS Drive Size
INCH					
T05T05SA-10	Chip Surfer T05	Chip Surfer T05	1.000	0.300	4mm Over Flats
T06T06SA-10	Chip Surfer T06	Chip Surfer T06	1.000	0.360	5mm Over Flats
T08T08SA-10	Chip Surfer T08	Chip Surfer T08	1.000	0.480	7mm Over Flats
T10T10SA-15	Chip Surfer T10	Chip Surfer T10	1.500	0.600	8mm Over Flats
T12T12SA-15	Chip Surfer T12	Chip Surfer T12	1.500	0.720	9mm Over Flats
T15T15SA-17	Chip Surfer T15	Chip Surfer T15	1.770	0.940	20mm Over Flats

T_T_SK - Reducer NEW



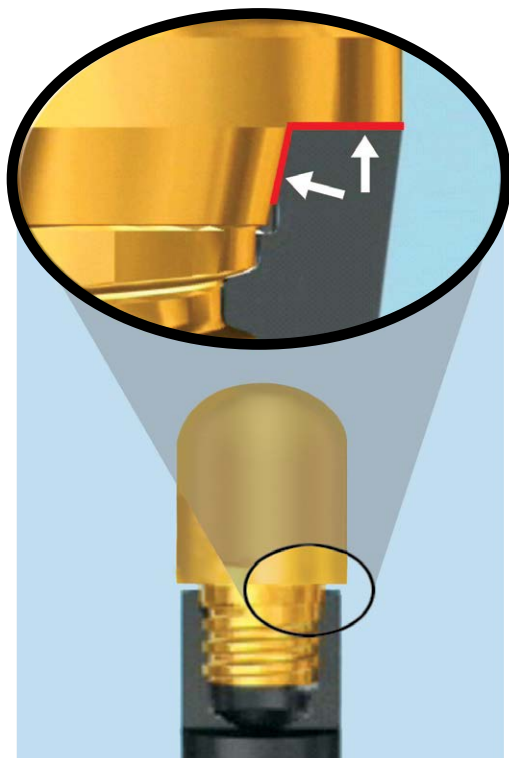
Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LPR Protruding Length	BD Body Dia.	DF Flange Dia.	DRVS Drive Size
INCH							
NEW T06T05SK-15	Chip Surfer T06	Chip Surfer T05	0.350	0.590	0.300	0.370	5mm Over Flats
NEW T08T06SK-16	Chip Surfer T08	Chip Surfer T06	0.350	0.630	0.370	0.500	7mm Over Flats
NEW T10T08SK-19	Chip Surfer T10	Chip Surfer T08	0.394	0.750	0.456	0.600	8mm Over Flats
NEW T12T10SK-24	Chip Surfer T12	Chip Surfer T10	0.590	0.950	0.600	0.748	9mm Over Flats
NEW T15T12SK-30	Chip Surfer T15	Chip Surfer T12	0.680	1.180	0.720	0.945	20mm Over Flats

MOD*T*SK



Part Number	CCMS Conection Code Machine Side	CCWS Conection Code Workpiece Side	LB Body Length	LPR Protruding Length	BD Body Dia.	BHTA Body Half Taper Angle	DF Flange Dia.	CNSC Coolant Entry Style Code	CXSC Coolant Exit Style Cone	DRVS Drive Size
INCH										
T06M08-25/1.0	TopOn M08	Chip Surfer T06	0.445	0.980	0.366	2.000	0.512	1.000	1.000	11 mm Over Flats
T06M06-16/.63	TopOn M06	Chip Surfer T06	0.457	0.630	0.366	2.000	0.382	1.000	1.000	8 mm Over Flats
T06M10-25/1.0	TopOn M10	Chip Surfer T06	0.654	0.980	0.378	5.000	0.709	1.000	1.000	11 mm Over Flats
T06M08-16/.63	TopOn M08	Chip Surfer T06	0.539	0.630	0.378	6.000	0.512	1.000	1.000	11 mm Over Flats
T08M08-16/.63	TopOn M08	Chip Surfer T08	0.213	0.630	0.461	11.000	0.512	1.000	1.000	11 mm Over Flats
T08M08-25/1.0	TopOn M08	Chip Surfer T08	0.768	0.980	0.461	2.000	0.512	1.000	1.000	11 mm Over Flats
T08M10-25/1.0	TopOn M10	Chip Surfer T08	0.559	0.980	0.461	2.000	0.709	1.000	1.000	11 mm Over Flats
T08M12-20/.75	TopOn M12	Chip Surfer T08	0.366	0.790	0.461	7.000	0.827	1.000	1.000	13 mm Over Flats
T08M12-25/1.0	TopOn M12	Chip Surfer T08	0.492	0.980	0.461	2.000	0.827	1.000	1.000	13 mm Over Flats
T08M10-20/.75	TopOn M10	Chip Surfer T08	0.445	0.790	0.461	7.000	0.709	1.000	1.000	13 mm Over Flats

TECHNICAL INFORMATION



- » When assembling, be sure carbide tip is seated firmly on shank with no gap
- » No lubricant on adaption
- » Tightening Torque:
 - T05=60in/lbs
 - T06=90in/lbs
 - T08=130in/lbs
 - T10=250in/lbs
 - T12=250in/lbs
 - T15=350in/lbs
 - T21=970in/lbs

INDEXING CHIPSURFER TIPS

- Step 1:** Screw tip into shank until finger tight (Figure 1a). Note a .010" gap (Figure 1b).
- Step 2:** Use wrench to torque approximately 1/4 turn, creating a simultaneous fit (Figure 2).
- Step 3:** Use .001" shim stock to check the simultaneous fit at the intersection of the tip and the shank.
The shim should not be able to enter the intersection (Figure 3a).
If it does, tighten further with the wrench until there is no gap (Figure 3b).

Note: Pre-set torque wrenches (series DT- . . .) can be purchased.

Figure 1a. Finger tight



Figure 1b. .010" gap



Figure 2. 1/4 turn



Figure 3a. Shim should NOT enter intersection



Figure 3b. Proper fit



Series DT- . . . Optional Torque Wrench



INTEGRAL ER COLLET ASSEMBLY INSTRUCTIONS

✓ **RIGHT WAY** (4 steps below)



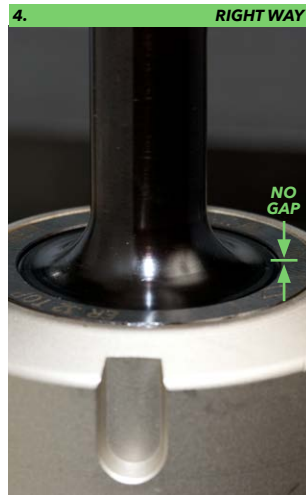
1. Place the nut on the integral ER collet. Assemble the nut with the shank by mating the retention tabs with the ER groove.



2. The nut/shank assembly is shown ready for installation.



3. Place the nut/shank assembly into the holder and secure the nut.



4. No gap.

✗ **WRONG WAY** (4 steps below)



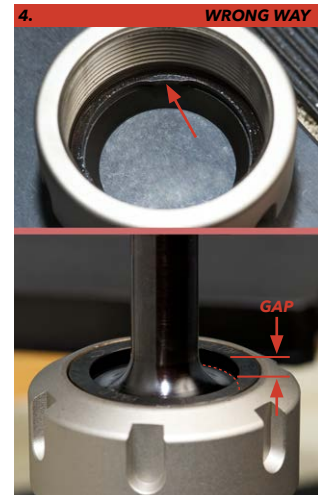
1. Remove nut from ER holder.



2. Place the integral ER collet into the collet chuck.

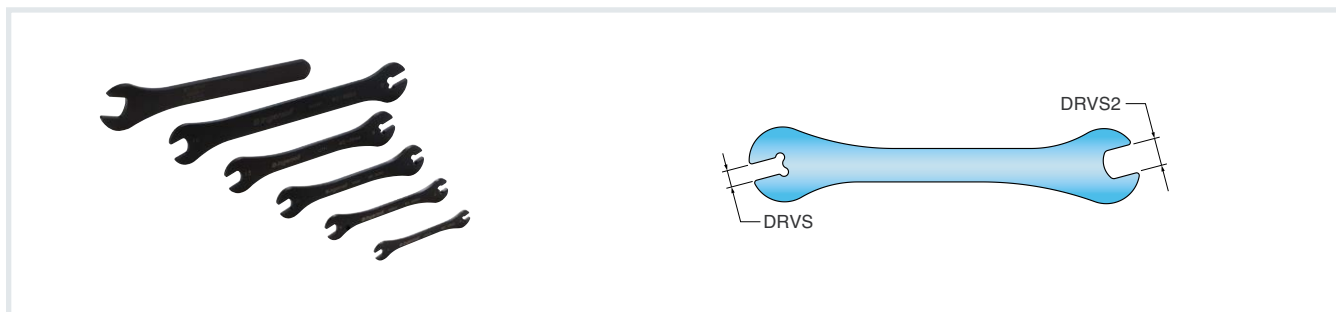


3. Screw the nut on the holder.



4. The nut will BIND up on the retention tabs prematurely, leaving a GAP. Applying extra force may BREAK THE NUT.

WRENCH



Part Number	DRVS Drive Size	DRVS2 Drive Size	CCWS Connection Code Workpiece Side
KIT CHIP SURFER WRENCH	Various - As Shown	Various - As Shown	Chip Surfer T05 - T15
WS-0029	5 mm External	8 mm External	Chip Surfer T06
WS-0030	7 mm External	10 mm External	Chip Surfer T08
WS-0043	4 mm External	6 mm External	Chip Surfer T05
WS-0044	8 mm External	13 mm External	Chip Surfer T10
WS-0059	9 mm External	16 mm External	Chip Surfer T12
WS-0061	20 mm External	-	Chip Surfer T15

TORQUE WRENCH (PRE-SET)



Part Number	Description
DT-130-07	Torque Wrench for T08 Chip Surfer Heads 7 mm Opening Pre-Set to 130 in lbs
DT-130-08	Torque Wrench for T08 Chip Surfer Heads 8 mm Opening Pre-Set to 130 in lbs
DT-130-10	Torque Wrench for T08 Chip Surfer Heads 10 mm Opening Pre-Set to 130 in lbs
DT-250-08	Torque Wrench for T10 Chip Surfer Heads 8 mm Opening Pre-Set to 250 in lbs
DT-250-09	Torque Wrench for T10 Chip Surfer Heads 9 mm Opening Pre-Set to 250 in lbs
DT-250-13	Torque Wrench for T10 Chip Surfer Heads 13 mm Opening Pre-Set to 250 in lbs
DT-250-16	Torque Wrench for T12 Chip Surfer Heads 16 mm Opening Pre-Set to 250 in lbs
DT-350-20	Torque Wrench for T15 Chip Surfer Heads 20 mm Opening Pre-Set to 350 in lbs
DT-60-04	Torque Wrench for T05 Chip Surfer Heads 4 mm Opening Pre-Set to 60 in lbs
DT-60-06	Torque Wrench for T05 Chip Surfer Heads 6 mm Opening Pre-Set to 60 in lbs
DT-90-05	Torque Wrench for T06 Chip Surfer Heads 5 mm Opening Pre-Set to 90 in lbs
DT-90-07	Torque Wrench for T06 Chip Surfer Heads 7 mm Opening Pre-Set to 90 in lbs
DT-90-08	Torque Wrench for T06 Chip Surfer Heads 8 mm Opening Pre-Set to 90 in lbs

TORQUE WRENCH (ADJUSTABLE)



Part Number	Description
DS-T2038SKT	T20 Torx Bit Socket, 3/8" Square Drive
DS-T2538SKT	T25 Torx Bit Socket, 3/8" Square Drive
DS-T3038SKT	T30 Torx Bit Socket, 3/8" Square Drive
DS-T4038SKT	T40 Torx Bit Socket, 3/8" Square Drive
DS-T5038SKT	T50 Torx Bit Socket, 3/8" Square Drive
WRENCHCS10-08	Wrench Head for T08 Chip Surfer 10 mm opening; For use with Adjustable Torque Wrench handle set to 15 N·m / 10.8 ft lb
WRENCHCS13-10	Wrench Head for T10 Chip Surfer 13 mm opening; For use with Adjustable Torque Wrench handle set to 28 N·m / 20.8 ft lb
WRENCHCS16-12	Wrench Head for T12 Chip Surfer 16 mm opening; For use with Adjustable Torque Wrench handle set to 28 N·m / 20.8 ft lb
WRENCHCS20-15	Wrench Head for T15 Chip Surfer 20 mm opening; For use with Adjustable Torque Wrench handle set to 40 N·m / 29.1 ft lb
WRENCHCS4E-05	Wrench Head for T05 Chip Surfer 4 mm opening; For use with Adjustable Torque Wrench handle set to 7 N·m / 5 ft lb
WRENCHCS5E-06	Wrench Head for T06 Chip Surfer 5 mm opening; For use with Adjustable Torque Wrench handle set to 10 N·m / 7.5 ft lb
WRENCHCS6-05	Wrench Head for T05 Chip Surfer 6 mm opening; For use with Adjustable Torque Wrench handle set to 7 N·m / 5 ft lb
WRENCHCS7E-08	Wrench Head for T08 Chip Surfer 7 mm opening; For use with Adjustable Torque Wrench handle set to 15 N·m / 10.8 ft lb
WRENCHCS8-06	Wrench Head for T06 Chip Surfer 8 mm opening; For use with Adjustable Torque Wrench handle set to 10 N·m / 7.5 ft lb
WRENCHCS8E-10	Wrench Head for T10 Chip Surfer 8 mm opening; For use with Adjustable Torque Wrench handle set to 28 N·m / 20.8 ft lb
WRENCHCS9E-12	Wrench Head for T12 Chip Surfer 9 mm opening; For use with Adjustable Torque Wrench handle set to 28 N·m / 20.8 ft lb
DS-38SKT9X12	90° Socket Adapter for Torx Drive Heads, 3/8" Square Drive, 9 x 12mm Connection
WRENCHTORQUE5-50Nm9X12	Adjustable Torque Handle (5-50 Nm) for use with Chip Surfer Open End Wrench Heads & Torx Drive Heads, 9 x 12 mm Drive Adaption