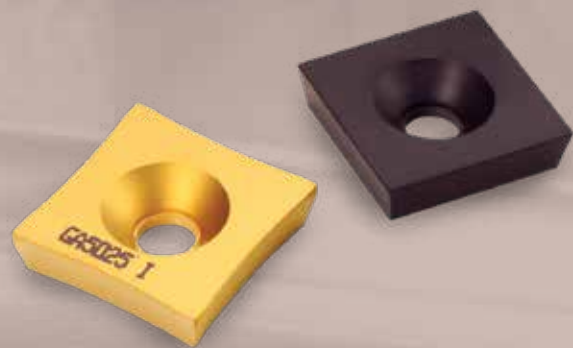
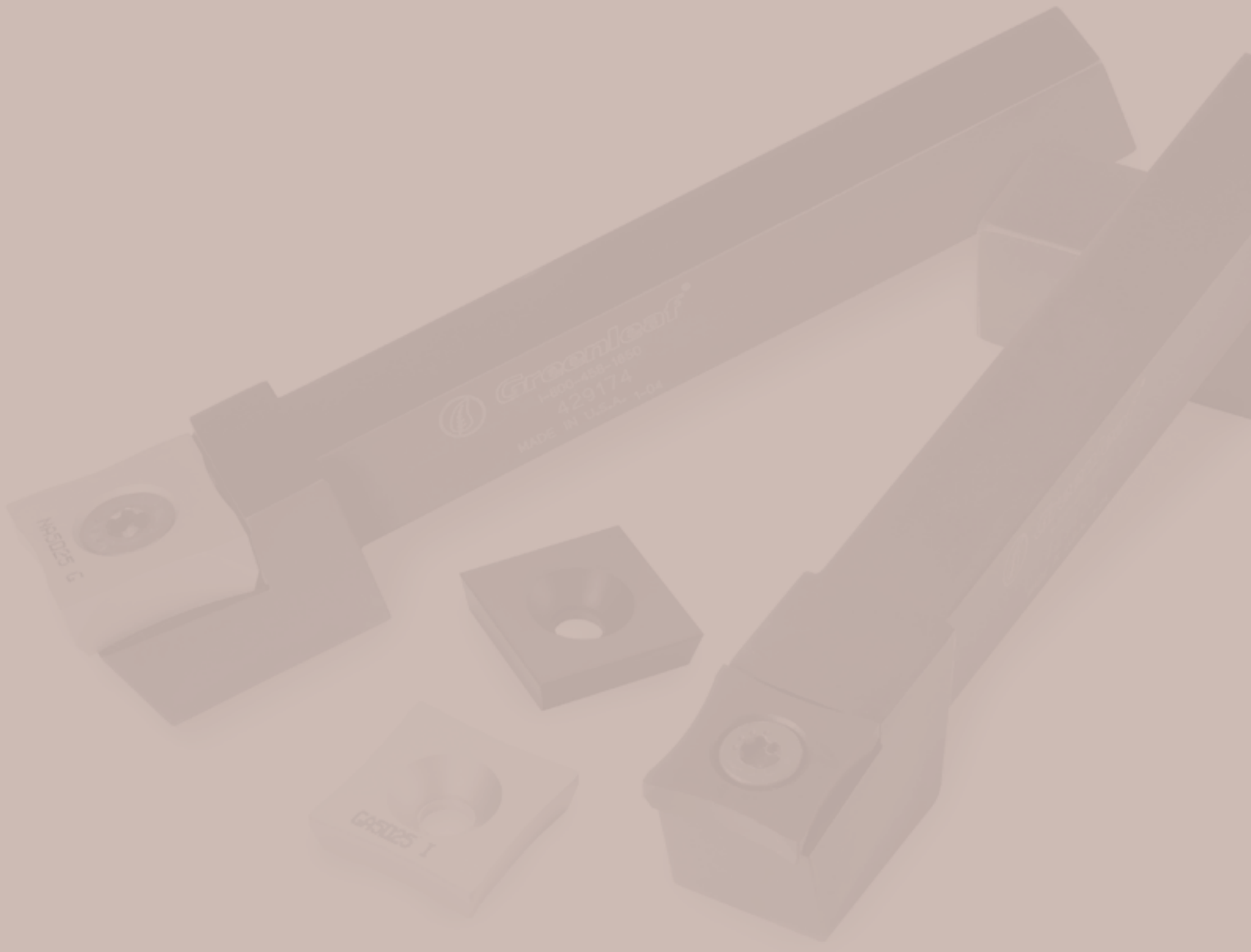


Tube Scarfing

Introduction.....	TS 03
Grade Descriptions	TS 04
Pictorial Index.....	TS 05
Inserts	TS 06-08
Toolholders.....	TS 09



TUBE SCARFING

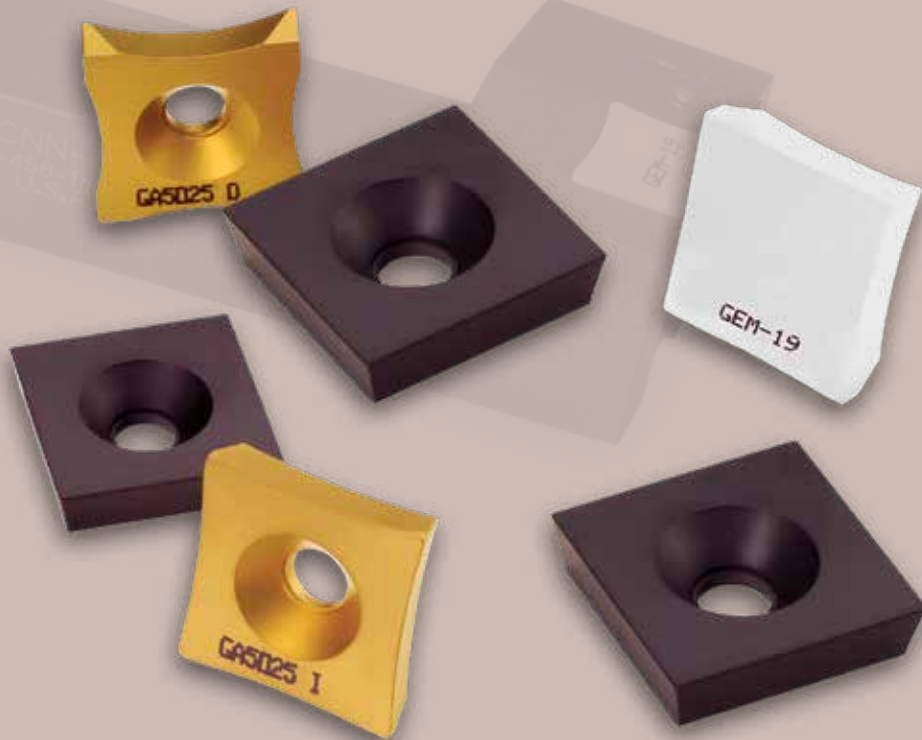


Tube Scarfing

Greenleaf's modern tube scarfing system using indexable inserts offers greatly increased productivity potential from decreased downtime, longer tool life, faster tool change time, decreased tool costs and elimination of regrinding problems. In addition, a superior seam can be expected since an accurate radius form is always available on each side of the insert.

Greenleaf Tune-Up Kits

A Tune-Up Kit consists of all the standard hardware to refurbish a particular toolholder, boring bar, or milling cutter. A toolholder will have a readily visible, laser-inscribed Tune-Up Kit number on it for ease in ordering. This number will prevent any confusion created by searching a catalog for hardware, and it will help reduce downtime.



Insert Grades

Carbide

Greenleaf offers a comprehensive line of carbide inserts in grades ranging from sub-micron C-1 through C-8 classifications. An industry pioneer in coated carbide, Greenleaf offers a variety of uncoated, MT-CVD coated and PVD-coated grades. Carbide inserts are available in ANSI standard geometries with multi-purpose chipbreakers for heavy roughing through finishing.



GA5023

A combination of an advanced MT-CVD coating and medium-grain substrate makes GA5023 an excellent choice for tube scarfing applications where toughness and abrasive wear resistance are required. The GA5023 grade is a tougher alternative option to GA5025 for any tube scarfing application.



GA5025

Primarily developed for high-speed steel turning, GA5025 also excels as a grade for tube scarfing applications thanks to its thick MT-CVD coating and hard, heat-resistant substrate. GA5025 is a great first choice when tool life and superior heat resistance are top priorities.

Ceramic

Greenleaf is the industry leader in the development and manufacture of ceramic and coated ceramic inserts in ANSI standard and special geometries.



GEM-19™

A cold-pressed and sintered Al₂O₃ ceramic, GEM-19™ provides an economical tube scarfing solution for high-speed operations with demanding finish requirements.



Pictorial & Reference Index

Insert



S-SPUB-63
page: TS 06



S-SPUB-86
page: TS 06



S-SGUB-63
page: TS 07



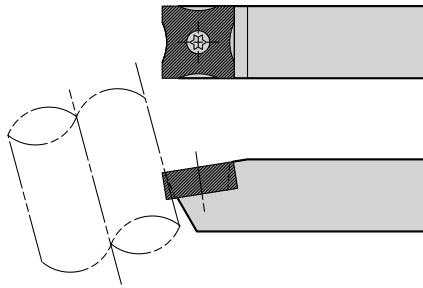
S-SNUN-46
page: TS 07



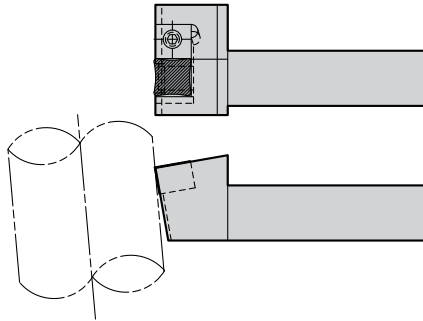
ID Scarfing
page: TS 08

Toolholders

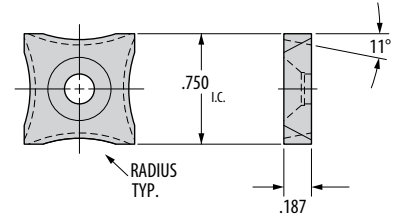
N-SSCPS
page: TS 09



N-WSCNN
page: TS 09



S-SPUB-63

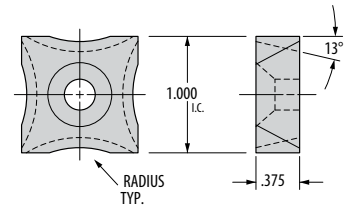


Shape: Scarfing	Part Number	GA5023	GA5025	Dimensions (inches)	
				Tube Size	Radius
	S-SPUB-63-B	●	◆	Up to .875"	0.475
	S-SPUB-63-C	●	◆	.875-1.125"	0.590
	S-SPUB-63-D	●	◆	1.125-1.500"	0.785
	S-SPUB-63-R	●	◆	1.750"	0.875
	S-SPUB-63-E	●	◆	1.500-1.875"	0.985
	S-SPUB-63-F	●	◆	1.875-2.250"	1.180
	S-SPUB-63-G	●	◆	2.250-3.125"	1.575
	S-SPUB-63-H	●	◆	3.125-3.875"	1.970
	S-SPUB-63-I	●	◆	3.875-4.875"	2.470
	S-SPUB-63-J	●	◆	4.875"-5.875"	2.970
	S-SPUB-63-K	●	◆	5.875-6.875"	3.470
	S-SPUB-63-L	●	◆	6.875-7.875"	3.970
	* S-SPUB-63-M	●	◆	7.875" and up	NONE
	S-SPUB-63-P	●	◆		6.000
S-SPUB-63-S	●	◆		0.375	

CARBIDE COATINGS: **MT-CVD Coated** PVD Coated Uncoated First Choice ◆ Second Choice ● Alternative ▲ Grade descriptions — pages TS 04
 CERAMIC CLASSIFICATION: **Whisker Ceramic** Phase-Toughened Silicon Nitride Alumina TiC Alumina

Note: Applicable for thin-wall pipe up to .250" thick
 * Note: This insert has 11° positive clearance all around.

S-SPUB-86



Additional thickness and flank clearance for heavy-wall pipe and pipe diameters over 5" are available.

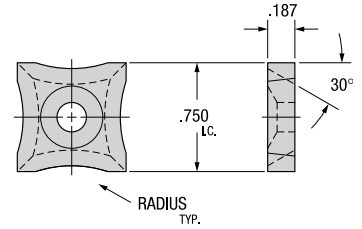
Shape: Scarfing	Part Number	GA5023	GA5025	Dimensions (inches)	
				Tube Size	Radius
	S-SPUB-86-B	●	◆	Up to .875"	0.475
	S-SPUB-86-C	●	◆	.875-1.125"	0.590
	S-SPUB-86-D	●	◆	1.125-1.500"	0.785
	S-SPUB-86-E	●	◆	1.500-1.875"	0.985
	S-SPUB-86-F	●	◆	1.875-2.250"	1.180
	S-SPUB-86-G	●	◆	2.250-3.125"	1.575
	S-SPUB-86-H	●	◆	3.125-3.875"	1.970
	S-SPUB-86-I	●	◆	3.875-4.875"	2.470
	S-SPUB-86-J	●	◆	4.875"-5.875"	2.970
	S-SPUB-86-K	●	◆	5.875-6.875"	3.470
	S-SPUB-86-L	●	◆	6.875-7.875"	3.970
	* S-SPUB-86-M	●	◆	7.875" and up	NONE
	S-SPUB-86-N	●	◆		5.000
	S-SPUB-86-S	●	◆		9.500
S-SPUB-86-P	●	◆		6.250	

CARBIDE COATINGS: **MT-CVD Coated** PVD Coated Uncoated First Choice ◆ Second Choice ● Alternative ▲ Grade descriptions — pages TS 04
 CERAMIC CLASSIFICATION: **Whisker Ceramic** Phase-Toughened Silicon Nitride Alumina TiC Alumina

* Note: This insert has 13° positive clearance all around.

TUBE SCARFING

S-SGUB-63



Additional flank clearance for coated tube operations.

Shape: Scarfing	Part Number	GA5025	Dimensions (inches)	
			Tube Size	Radius
	S-SGUB-63-B	◆	Up to .875"	0.475
	S-SGUB-63-C	◆	.875-1.125"	0.590
	S-SGUB-63-D	◆	1.125-1.500"	0.785
	S-SGUB-63-E	◆	1.500-1.875"	0.985
	S-SGUB-63-F	◆	1.875-2.250"	1.180
	S-SGUB-63-G	◆	2.250-3.125"	1.575
	S-SGUB-63-H	◆	3.125-3.875"	1.970
	S-SGUB-63-I	◆	3.875-4.875"	2.470
	S-SGUB-63-J	◆	4.875"-5.875"	2.970
	S-SGUB-63-K	◆	5.875-6.875"	3.470
	S-SGUB-63-L	◆	6.875-7.875"	3.970
	* S-SGUB-63-M	◆	7.875" and up	NONE
	S-SGUB-63-R	◆	1.750" DIA	0.875
	S-SGUB-63-S	◆		0.375
S-SGUB-63-P	◆		6.000	

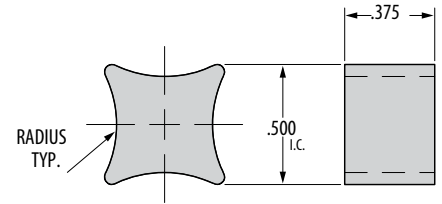
CARBIDE COATINGS: **MT-CVD Coated** PVD Coated Uncoated First Choice ◆ Second Choice ● Alternative ▲ *Grade descriptions — pages TS 04*

CERAMIC CLASSIFICATION: **Whisker Ceramic** Phase-Toughened Silicon Nitride Alumina TiC Alumina

* Note: This insert has 30° positive clearance all around.

S-SNUN-46

Ceramic-Style Insert



Shape: Scarfing	Part Number	GEM-19	Dimensions (inches)	
			Tube Size	Radius
	S-SNUN-46-B	◆	Up to .875"	0.475
	S-SNUN-46-C	◆	.875-1.125"	0.590
	S-SNUN-46-D	◆	1.125-1.500"	0.785
	S-SNUN-46-E	◆	1.500-1.875"	0.985
	S-SNUN-46-F	◆	1.875-2.250"	1.180
	S-SNUN-46-G	◆	2.250-3.125"	1.575
	S-SNUN-46-H	◆	3.125-3.875"	1.970

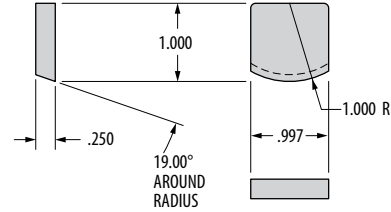
CARBIDE COATINGS: **MT-CVD Coated** PVD Coated Uncoated First Choice ◆ Second Choice ● Alternative ▲ *Grade descriptions — pages TS 04*

CERAMIC CLASSIFICATION: **Whisker Ceramic** Phase-Toughened Silicon Nitride Alumina TiC Alumina

TUBE SCARFING

ID Scarfing Insert

Other sizes available upon request.



NOTE: This illustration is for reference only

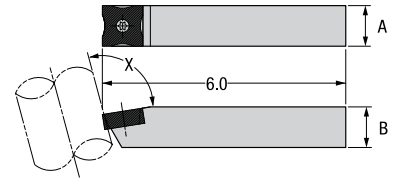
Greenleaf ID tube scarfing inserts are specially designed and manufactured to meet specific customer requirements for various tube scarfing applications.

For more information on Greenleaf's ID tube scarfing capabilities, please contact Greenleaf Technical Service at

800-763-1820 or techteam@greenleafcorporation.com.



N-SSCPS

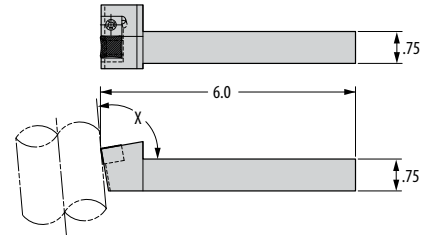


Part Number	Gage Insert	Angle X	Dimensions (inches)		Standard Component Insert Screw	Tune-Up Kit* Includes All Standard Components
			A	B		
N-SSCPS-12-90	S-SPUB-63	90°	0.750	0.750	10-32 x 1/2 IPFHCS	TK-00576
N-SSCPS-12-95	S-SPUB-63	95°	0.750	0.750	10-32 x 1/2 IPFHCS	TK-00576
N-SSCPS-12-100	S-SPUB-63	100°	0.750	0.750	10-32 x 1/2 IPFHCS	TK-00576
N-SSCPS-12-105	S-SPUB-63	105°	0.750	0.750	10-32 x 1/2 IPFHCS	TK-00576
N-SSCPS-16-8-90	S-SPUB-86	90°	1.000	1.000	1/4-20 x 3/4 IPFHCS	TK-00760
N-SSCPS-16-8-95	S-SPUB-86	95°	1.000	1.000	1/4-20 x 3/4 IPFHCS	TK-00760
N-SSCPS-16-8-100	S-SPUB-86	100°	1.000	1.000	1/4-20 x 3/4 IPFHCS	TK-00760
N-SSCPS-16-8-105	S-SPUB-86	105°	1.000	1.000	1/4-20 x 3/4 IPFHCS	TK-00760

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

N-WSCNN

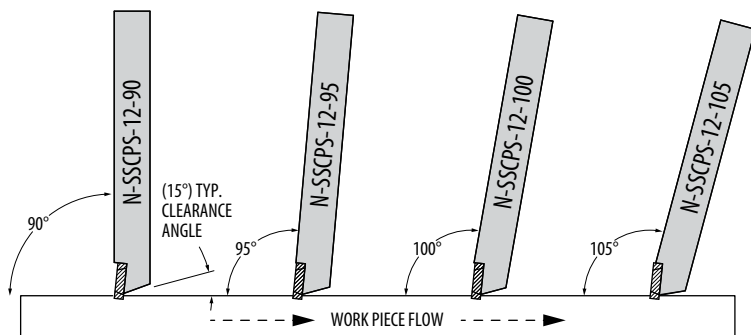
Ceramic Insert Holder



Part Number	Gage Insert	Angle X	Standard Component		Tune-Up Kit* Includes All Standard Components
			Wedge	Wedge Screw	
N-WSCNN-12-90	S-SNUN-46	90°	303996	38309	TK-00577
N-WSCNN-12-95	S-SNUN-46	95°	303996	38309	TK-00577
N-WSCNN-12-100	S-SNUN-46	100°	303996	38309	TK-00577
N-WSCNN-12-105	S-SNUN-46	105°	303996	38309	TK-00577

* Tune-Up Kits include one complete set of Standard Components to allow you to refurbish the toolholder.

Tool Holder Selection Guide



Notes:

1. The tool holder angle (Angle X) should match the angle of the tube mill tool post.
2. The correct setup will allow for 15° of clearance between the tool holder body, and the top of the tube.

TUBE SCARFING