

Ti-Loc[®] Signature Series Tooling

'ER' Taper Integrated Small Tooling For Slitting & Milling

**TIR Held to <.0002" or Better
GUARANTEED**

- Reduces Tolerance "Stacking"
- Increases Tool Rigidity
- Enables QUICK CHANGE
- Precision Ground ER Tapers
- Maintains Exceptional TIR
- Coolant-Thru Capability
- Patented Design

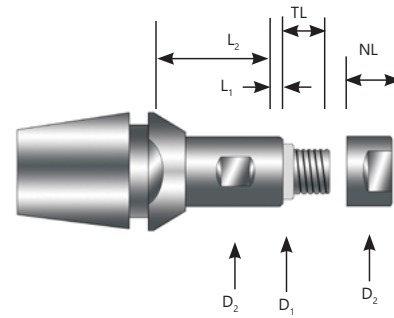


www.GenSwiss.com | 413-562-4800 | sales@genswiss.com

Ti-Loc® Slitting Saw Arbors



The Ti-Loc tool directly mounts into any ER Taper Live or Static Tool Position. Simply insert the Ti-Loc holder into most ER nuts and twist to align the locking cam profile just as you would any ER collet. It comes standard with ER11, ER16 and ER20 taper arbors that serve as their own collet, eliminating the need for a two-piece arbor system.



All Ti-Loc Saw Arbors Include
(2) Saw Clamping Nuts



Nut w/Smaller Width For
Clamping Thicker Saws

Standard Nut For Clamping
Standard Saws

NOTE: Ti-Loc® Tooling is designed to fit best with REGO-FIX® Hi-Q® nuts. May not be compatible with other brands.

ER11 Saw Arbors (Inch)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000208	SAT-11-3.18-064100	.1250in	6.40mm	.045mm	10.00mm	5.00mm	5.00mm
4800-000209	SAT-11-3.18-064140	.1250in	6.40mm	.045mm	14.00mm	5.00mm	5.00mm
4800-000210	SAT-11-3.18-064190	.1250in	6.40mm	.045mm	19.00mm	5.00mm	5.00mm
4800-000224	SAT-11-3.18-064250	.1250in	6.40mm	.045mm	25.00mm	5.00mm	5.00mm
4800-000212	SAT-11-4.76-080100	.1875in	8.00mm	.045mm	10.00mm	5.00mm	6.35mm
4800-000213	SAT-11-4.76-080140	.1875in	8.00mm	.045mm	14.00mm	5.00mm	6.35mm
4800-000214	SAT-11-4.76-080190	.1875in	8.00mm	.045mm	19.00mm	5.00mm	6.35mm
4800-000225	SAT-11-4.76-080250	.1875in	8.00mm	.045mm	25.00mm	5.00mm	6.35mm

ER11 Saw Arbors (Metric)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000205	SAT-11-3.00-064100	3.00mm	6.40mm	1.00mm	10.00mm	5.00mm	5.00mm
4800-000206	SAT-11-3.00-064140	3.00mm	6.40mm	1.00mm	14.00mm	5.00mm	5.00mm
4800-000207	SAT-11-3.00-064190	3.00mm	6.40mm	1.00mm	19.00mm	5.00mm	5.00mm
4800-000223	SAT-11-3.00-064250	3.00mm	6.40mm	1.00mm	25.00mm	5.00mm	5.00mm
4800-000216	SAT-11-5.00-080100	5.00mm	8.00mm	1.00mm	10.00mm	5.00mm	6.35mm
4800-000217	SAT-11-5.00-080140	5.00mm	8.00mm	1.00mm	14.00mm	5.00mm	6.35mm
4800-000218	SAT-11-5.00-080190	5.00mm	8.00mm	1.00mm	19.00mm	5.00mm	6.35mm
4800-000226	SAT-11-5.00-080250	5.00mm	8.00mm	1.00mm	25.00mm	5.00mm	6.35mm
4800-000220	SAT-11-6.00-080100	6.00mm	8.00mm	1.00mm	10.00mm	6.35mm	8.00mm
4800-000221	SAT-11-6.00-080140	6.00mm	8.00mm	1.00mm	14.00mm	6.35mm	8.00mm
4800-000222	SAT-11-6.00-080190	6.00mm	8.00mm	1.00mm	19.00mm	6.35mm	8.00mm
4800-000227	SAT-11-6.00-080250	6.00mm	8.00mm	1.00mm	25.00mm	6.35mm	8.00mm

Ti-Loc® Slitting Saw Arbors

ER16 Saw Arbors (Inch)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000148	SAT-16-3.18-064180	.1250in	.2519in	.0017in	.7086in	0.25in	.2559in
4800-000149	SAT-16-3.18-064240	.1250in	.2519in	.0017in	.9448in	0.25in	.2559in
4800-000151	SAT-16-4.76-095180	.1875in	.3740in	.0017in	.7086in	0.25in	.2559in
4800-000154	SAT-16-4.76-095240	.1875in	.3740in	.0017in	.9448in	0.25in	.2559in
4800-000158	SAT-16-6.35-095180	.2500in	.3740in	.0017in	.7086in	0.25in	.2559in
4800-000162	SAT-16-6.35-095240	.2500in	.3740in	.0017in	.9448in	0.25in	.2559in
4800-000190	SAT-16-7.94-100180	.3125in	.3937in	.0017in	.7086in	0.25in	.2559in
4800-000168	SAT-16-7.94-100240	.3125in	.3937in	.0017in	.9448in	0.25in	.2559in
4800-000294	SAT-16-7.94-100500	.3125in	.3937in	.0017in	1.9685in	0.25in	.2559in

ER16 Saw Arbors (Metric)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000146	SAT-16-3.00-064180	3.00mm	6.40mm	1.00mm	18.00mm	6.35mm	6.50mm
4800-000147	SAT-16-3.00-064240	3.00mm	6.40mm	1.00mm	24.00mm	6.35mm	6.50mm
4800-000152	SAT-16-5.00-095180	5.00mm	9.50mm	1.00mm	18.00mm	6.35mm	6.50mm
4800-000185	SAT-16-5.00-095240	5.00mm	9.50mm	1.00mm	24.00mm	6.35mm	6.50mm
4800-000156	SAT-16-6.00-095180	6.00mm	9.50mm	1.00mm	18.00mm	6.35mm	6.50mm
4800-000159	SAT-16-6.00-095240	6.00mm	9.50mm	1.00mm	24.00mm	6.35mm	6.50mm
4800-000191	SAT-16-8.00-100180	8.00mm	10.00mm	1.00mm	18.00mm	6.35mm	6.50mm
4800-000186	SAT-16-8.00-100240	8.00mm	10.00mm	1.00mm	24.00mm	6.35mm	6.50mm

ER20 Saw Arbors (Inch)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000236	SAT-20-3.18-064180	.125in	.2519in	.0017in	.7086in	.25in	.2559in
4800-000237	SAT-20-3.18-064300	.125in	.2519in	.0017in	1.181in	.25in	.2559in
4800-000242	SAT-20-4.76-095180	.1875in	.2519in	.0017in	.7086in	.25in	.3051in
4800-000243	SAT-20-4.76-095300	.1875in	.2519in	.0017in	1.1811in	.25in	.3051in
4800-000257	SAT-20-6.35-095180	.2500in	.3740in	.0017in	.7086in	.25in	.3051in
4800-000258	SAT-20-6.35-095300	.2500in	.3740in	.0017in	1.1811in	.25in	.3051in
4800-000262	SAT-20-7.94-100180	.3125in	.3937in	.0017in	.7086in	.25in	.3051in
4800-000263	SAT-20-7.94-100300	.3125in	.3937in	.0017in	1.1811in	.25in	.3051in
4800-000270	SAT-20-9.52-125180	.3750in	.4921in	.0017in	.7086in	.27in	.3543in
4800-000271	SAT-20-9.52-125300	.3750in	.4921in	.0017in	1.1811in	.27in	.3543in

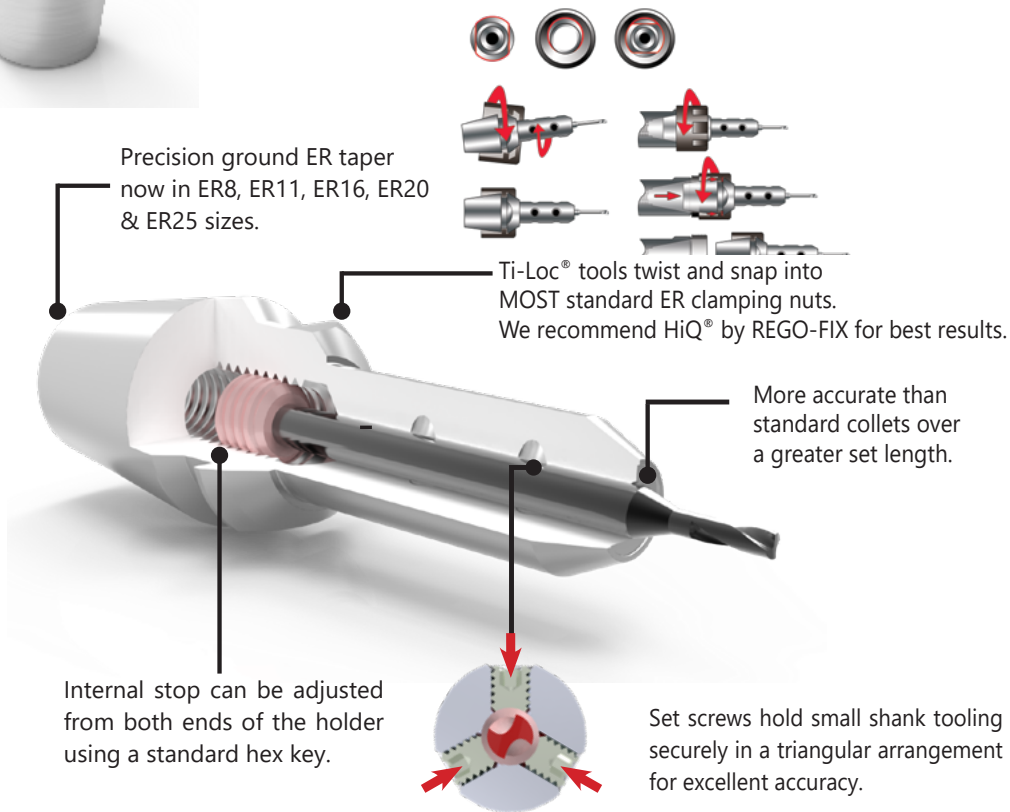
ER20 Saw Arbors (Metric)		SAW ID	BODY DIAMETER	JOURNAL THICKNESS	EXTENSION LENGTH	NUT LENGTH	THREAD LENGTH
Item No.	Description	D ₁	D ₂	L ₁	L ₂	NL	TL
4800-000232	SAT-20-3.00-064180	3.00mm	6.40mm	1.00mm	18.00mm	6.35mm	6.50mm
4800-000233	SAT-20-3.00-064300	3.00mm	6.40mm	1.00mm	30.00mm	6.35mm	6.50mm
4800-000246	SAT-20-5.00-095180	5.00mm	9.50mm	1.00mm	18.00mm	6.35mm	7.75mm
4800-000247	SAT-20-5.00-095300	5.00mm	9.50mm	1.00mm	30.00mm	6.35mm	7.75mm
4800-000252	SAT-20-6.00-095180	6.00mm	9.50mm	1.00mm	18.00mm	6.35mm	8.50mm
4800-000253	SAT-20-6.00-095300	6.00mm	9.50mm	1.00mm	30.00mm	6.35mm	8.50mm
4800-000266	SAT-20-8.00-100180	8.00mm	10.00mm	1.00mm	18.00mm	6.35mm	7.75mm
4800-000267	SAT-20-8.00-100300	8.00mm	10.00mm	1.00mm	30.00mm	6.35mm	7.75mm
4800-000274	SAT-20-10.0-125180	10.00mm	12.50mm	1.00mm	18.00mm	7.00mm	9.00mm
4800-000275	SAT-20-10.0-125300	10.00mm	12.50mm	1.00mm	30.00mm	7.00mm	9.00mm

Ti-Loc® End Mill Extensions



The BEST Method For Running Micro End Mills In Your CNC Swiss

- Enables micro tools to clear the guide bushing
- Maintains exceptional TIR at extended length
- Solves deflection and chatter issues
- Coolant-thru versions for ER16 sizes
- TIR <.0002in



Replacement Stop Screws

Item No.	Size	Fits
8999-000021	M6	ER11
8999-000206	M8	ER16 & 20
8999-000210	M10	ER25



Replacement Set Screws

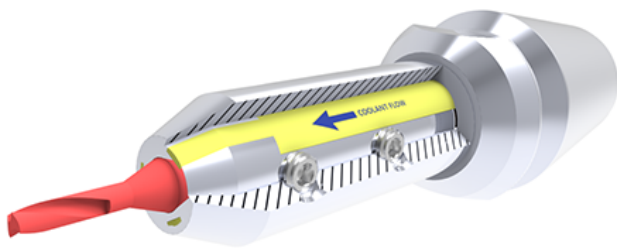
Item No.	Size
8999-000011	M3
8999-000007	M4
8999-000214	M5



Ti-Loc® Coolant-Thru

Ti-Loc Mill Extensions and Saw Arbors (ER16) integrate coolant-thru capability. In addition, the ER16 taper arbors serve as their own collet, eliminating the need of a two piece arbor system. With the increased usage of micro tooling operating at higher speeds in more compact tooling zones, these micro tool holder offerings help solve the need for more efficient machining operations while extending tool life.

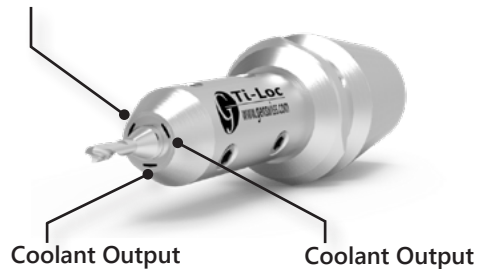
The Tooling Upgrade You've Been Waiting For!



Our variants are designed to provide the added benefits of optimum edge control and chip evacuation and can be paired with standard coolant-through collet sleeves as well as coolant-through live tooling.

For live tools unequipped with coolant-through capability, a coolant-through nut such as REGO FIX's ReCool nut can be used to deliver high pressure coolant to each of the Ti-Loc's coolant delivery ports surrounding the micro tool.

Coolant Output



Coolant Input
For use with ReCool Nut
Enables Non-Coolant Thru
Holders to be used with
Coolant Connections



Hi-Q®/ER



Hi-Q®/ERB



Hi-Q®/ERM



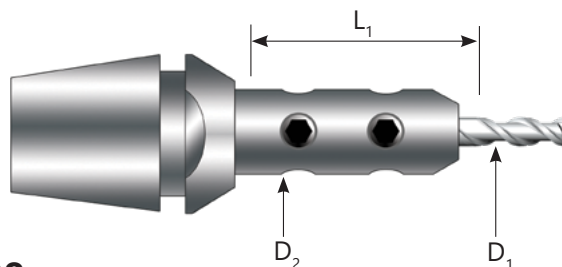
Hi-Q®/ERMX intrRlox®



Hi-Q®/ERAX

(NOTE: Ti-Loc® Tooling is designed to fit best with REGO-FIX® Hi-Q® nuts. May not be compatible with other brands).

Ti-Loc® Mill Extensions



Coolant-Thru Versions
Available For ER16

ER8

Item No.	Description	L ₁	D ₁	D ₂
4900-110100	CTE-08-1.00-064100	10	1	6.4
4900-110150	CTE-08-1.50-064100		1.5	6.4
4900-110159	CTE-08-1.59-064100		.062in	6.4
4900-110200	CTE-08-2.00-064100		2	6.4
4900-110300	CTE-08-3.00-070100		3	7
4900-110318	CTE-08-3.18-070100		.125in	7
4900-115100	CTE-08-1.00-064150	15	1	6.4
4900-115150	CTE-08-1.50-064150		1.5	6.4
4900-115159	CTE-08-1.59-064150		.062in	6.4
4900-115200	CTE-08-2.00-064150		2	6.4
4900-115300	CTE-08-3.00-070150		3	7
4900-115318	CTE-08-3.18-070150		.125in	7

NOTE: ER8 Holders Include a special M10x.75 clamping nut

ER11

Item No.	Description	L ₁	D ₁	D ₂
4900-210100	CTE-11-1.00-064100	10	1	6.4
4900-210150	CTE-11-1.50-064100		1.5	6.4
4900-210159	CTE-11-1.59-064100		.062in	6.4
4900-210200	CTE-11-2.00-064100		2	6.4
4900-210300	CTE-11-3.00-080100		3	8
4900-210318	CTE-11-3.18-080100		.125in	8
4900-215300	CTE-11-3.00-080150	15	3	8
4900-215318	CTE-11-3.18-080150		.125in	8
4900-210400	CTE-11-4.00-080100		4	8
4900-215400	CTE-11-4.00-080150	16	4	8
4900-216400	CTE-11-4.00-080160		4	8
4900-220300	CTE-11-3.00-080200	20	3	8
4900-220318	CTE-11-3.18-080200		.125in	8
4900-220400	CTE-11-4.00-080200		4	8

ER16

Item No.	Description	L ₁	D ₁	D ₂
4900-306318	CTE-16-3.18-095060	6mm	1/8in	9.5
4900-316100	CTE-16-1.00-064160	16	1	6.4
4900-316150	CTE-16-1.50-064160		1.5	6.4
4900-316159	CTE-16-1.59-064160		.062in	6.4
4900-316200	CTE-16-2.00-064160		2	6.4
4900-316300	CTE-16-3.00-095160		3	8
4900-316318	CTE-16-3.18-095160		.187in	9.5
4900-316400	CTE-16-4.00-095160	20	4	9.5
4900-316476	CTE-16-4.76-095160		.187in	9.5
4900-316500	CTE-16-5.00-095160		5	9.5
4900-320300	CTE-16-3.00-095200	20	3	9.5
4900-325300	CTE-16-3.00-095250	25	3	9.5
* 4900-325300C	CTE-16-3.00-095250C		3	9.5
* 4900-325318	CTE-16-3.18-095250		.125in	9.5
* 4900-325318C	CTE-16-3.18-095250C		.125in	9.5
4900-325400	CTE-16-4.00-095250		4	9.5
4900-325476	CTE-16-4.76-095250		.187in	9.5
4900-325500	CTE-16-5.00-095250	3/16in	5	9.5
* 4900-340476	CTE-16-4.76-095400		3/16in	9.5

* Coolant-Thru Version

ER20

Item No.	Description	L ₁	D ₁	D ₂
4900-414300	CTE-20-3.00-095140	14	3	9.5
4900-414476	CTE-20-4.76-114140		.187in	11.4
4900-414500	CTE-20-5.00-114140		5	11.4
4900-414600	CTE-20-6.00-125140		6	12.5
4900-414635	CTE-20-6.35-125140	16	.250in	12.5
4900-416318	CTE-20-3.18-095160		.125in	9.5
4900-416400	CTE-20-4.00-095160		4	9.5
4900-416476	CTE-20-4.76-114160	25	.187in	11.4
4900-425300	CTE-20-3.00-095250		3	9.5
4900-425318	CTE-20-3.18-095250		.125in	9.5
4900-425400	CTE-20-4.00-095250		4	9.5
4900-425476	CTE-20-4.76-114250		.187in	11.4
4900-425500	CTE-20-5.00-114250		5	11.4
4900-425600	CTE-20-6.00-125250	.250in	6	12.5
4900-425635	CTE-20-6.35-125250		.250in	12.5

Collet Reduction

Item No.	Description	Shank Size	Collet Size	Extension Length
4910-000100	RTE-16-08-100254	ER16	ER8	1.0 in



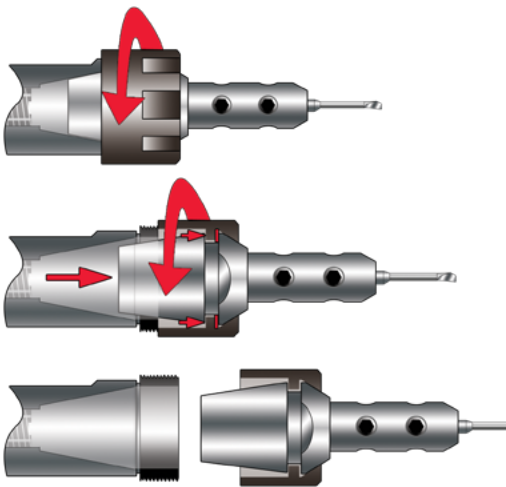
Extend the reach of your tools
with superior TIR

Special sizes available upon request. Quick turnaround time.
Please call 413-562-4800 for additional sizes.

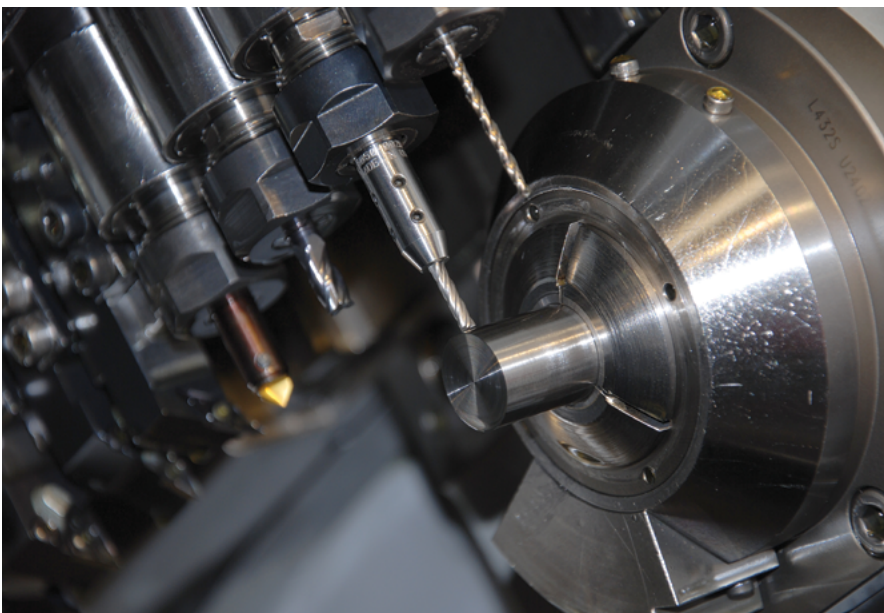
Ti-Loc® Best Case Uses

Ti-Loc SwissClamp Slitting and Milling Tool Holders are commonly used in rotary cutting a variety of materials, including metal, plastic, wood and composites. They are used primarily in manufacturing aerospace and automotive, medical and dental.

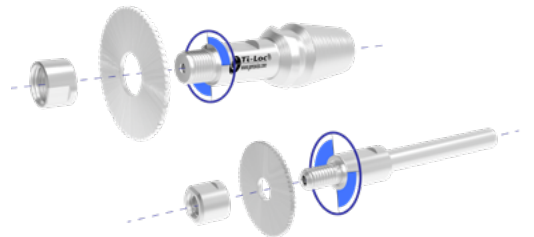
Enables Quick Change of tooling into fixed locations. No special holding nut is required. The quick change is accomplished by loosening the clamping nut allowing the tool holder to break from the locking taper of the spindle or sleeve. They are internally stopped to adjust positioning of the shank. Operators can preset offline for use as quick change or swap out while installed in multiple positions on live tools.



Ti-Loc In-Machine Slitting Saw



Ti-Loc In-Machine End Mill Extension



This single piece design adds rigidity of setup and improves total indicated runout [TIR]. In fact, it reduces tolerance "stacking" to an incredible low TIR of 0.0002 or better.

Less expensive and more cost effective than most comparable two-piece arbor systems with a maximum saw thickness of approximately 0.080".

ADDITIONAL INFORMATION & RESOURCES



Signature Series Catalog



Saw Arbors Catalog

Visit www.GenSwiss.com or Call Us 413-562-4800 to Request Catalogs



Ti-Loc is a patented design of GenSwiss Signature Series Line of Premium Products. Standard and custom orders are available. Contact us for more information.