TRAK® MACHINE TOOLS

Featuring
ProtoTRAK CNCs

Introducing the RX Series

LATHES

Featuring the NEW
ProtoTRAK RLX

TRAK
RLX LATHES

The ProtoTRAK CNC is always easy to use:

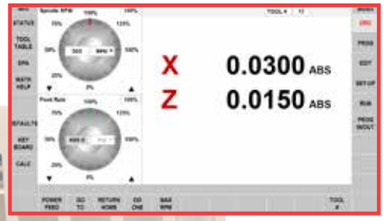
- **Manual turning** when you need it
- **CNC** with manual tool changes
- **Light production** CNC with programmed tool changes
- **Real Handwheels** for manual operation and TRAKing™
- **Generous X travel** accommodates a variety of tool set ups
- **Precision ground ballscrews** for accurate, precise positioning
- **Programmable spindle** for constant surface speed
- **Brushless servo motors** for power and fast positioning

TRAK Toolroom Lathes make every turning job easier and more productive

Featuring the *amazing new*

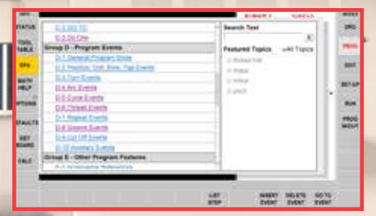
ProtoTRAK RLX CNC

Touchscreen for an extraordinary user experience that will keep you working fast



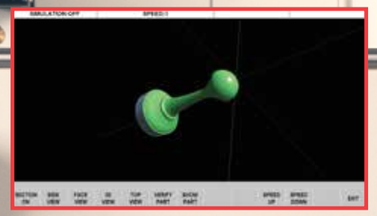
Powerful Features for **manual turning**

Flyout windows for instant access to the Tool Table, Status, Calculators and more!



Enhanced ProtoTRAK Assistance – instructions at your fingertips

Defaults teach the ProtoTRAK RLX your machining style



Powerful solid model **graphics** for optional Verify and DXF converter

Math Help software to calculate missing data for you as you program

Easy, prompted programming **events** with graphics that update while you program

Make every job easier and more productive

The ProtoTRAK RLX keeps you in control every step of the way

Machinists love to use ProtoTRAKs and it is no wonder. You get the automation you need to be efficient in an elegant interface that is easy to learn and use. At the same time it provides you with the manual capability that you need for so many things you do in a day.

Manual with DRO

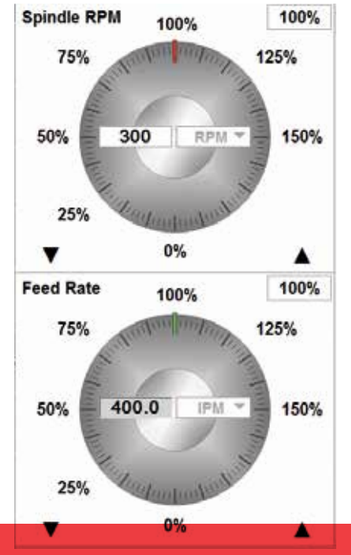
The Electronic Handwheels give you power and convenient operation. Automatic Taper and Radius features give you simultaneous X/Z operation without CNC programming and setup.

Tool setting

Precise tool setting is easy with graphics and prompts guiding you. Choose the tool type and the appropriate icon will show you where to touch your tools.

Shop floor operation

Every operation of the ProtoTRAK RLX, including part programming, is configured for the shop floor. Instructions in plain English and conversational programming bring advanced capability to you right where the chips are cut.



Overrides

You program spindle speeds and feedrates, but don't sweat getting them perfect. When you run you have really cool graphical overrides to make adjustments.

Editing on the fly

Getting into your program to make changes is quick and easy. From any screen, tap PROG. With a few swipes you're at the event you want to change. Tap the data you want to change and put in the new data. Done. Start machining again.

TRAKing®

We simply cannot say enough about this awesome feature.

Picture this: you've written the program. Looked at the toolpath. Everything looks good, so you turn on the spindle and start to run.

But...you have TRAKing®. So before you press the GO button you press TRAKing® and then grab the handwheels. Talk about being in control! As you crank, the ProtoTRAK runs the program X and Z. You move the feed fast or slow. You can go forward or backward through the toolpath. You can stop and turn off the spindle to brush off chips...you're in control, not the CNC.

That's TRAKing®.

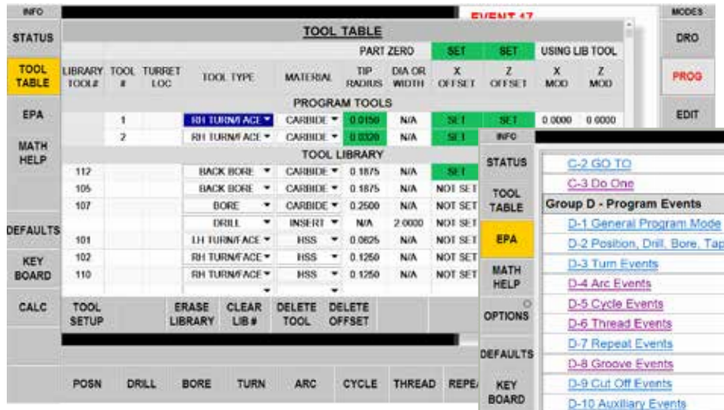
Get a demo and play with it yourself!

Introducing the RLX Control Touchscreen

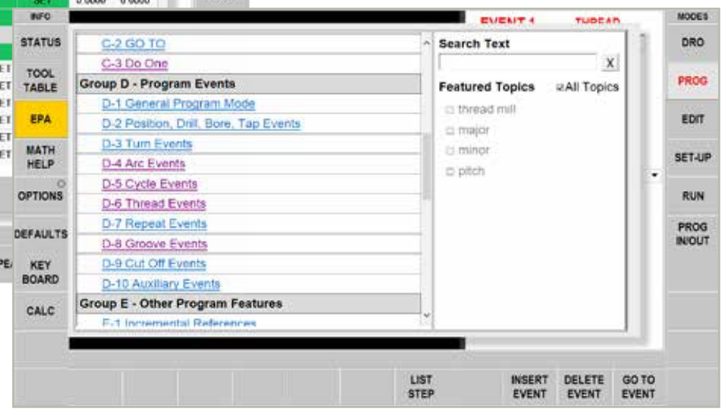
as only ProtoTRAK could do it

Flyout Windows

Tap on an Info Key and a Flyout Window appears.
Tap it again and you're back on the screen you started.



Just tap **TOOL TABLE** to define your tools as you program.



Enhanced ProtoTRAK Assistance in a Flyout Window gives you the help you need on demand.

There's more to Flyout Windows!

Status to check program names, in/mm conversion and more.
Math Help with 21 separate routines to calculate print dimensions
Options for quick access to advanced functions
Defaults that customize the ProtoTRAK to your machining style
Keyboard for letters, numbers and symbols
Calculator for simple math with auto load of data

See more on flyout windows at our website www.trakmt.com/RLX

Swipe to Navigate, Tap to Enter

Simple changes to the program have never been easier.
Move easily through your program by swiping as the line color in the drawing shows you which event you are viewing.

Tap to select the data you want to input or change.

See our touchscreen video at www.trakmt.com/RLX

Interact with your part graphics

You can zoom, pan or rotate your drawings and 3D models by using the touchscreen.

See more about tap, swipe, pan, zoom and other touchscreen gestures on our website www.trakmt.com/RLX
Or, better yet, get a demo in your shop. Talk to your TRAK Machine Tools Rep. Chances are, he'll have a Demo Box with him!

Programming the ProtoTRAK RLX

Powerful and always easy

Programming the ProtoTRAK RLX is simply a matter of choosing the geometry from among the canned cycles and then answering the prompts one by one. Everything is in plain language with no codes for you to memorize.

Events

Programming is a simple process of selecting the Event and then describing the geometry from print data.

Tap the event you want

...and fill in the prompts

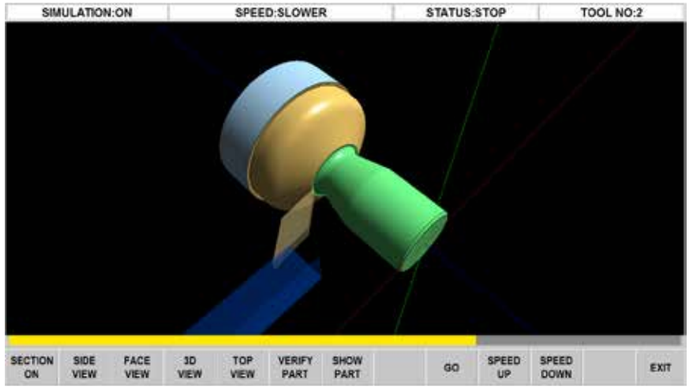
You may program complete prints or just write simple programs for single operations.

It's that easy!

Canned Routines

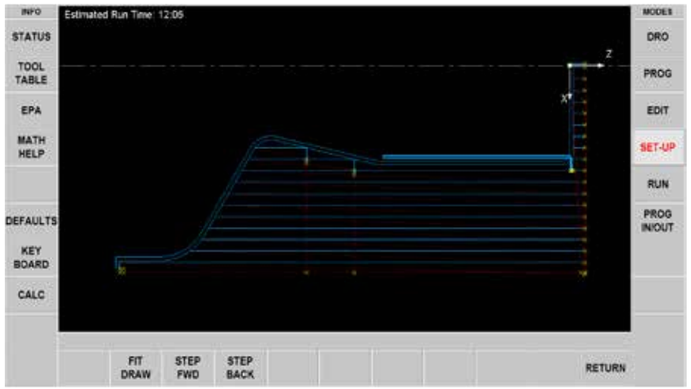
There are a dozen canned routines that make it easy to program even complex shapes right on the shop floor.

Verify Simulation



It is easy to catch mistakes with the powerful graphics of the ProtoTRAK RLX. Optional Verify will give you an animated simulation, allowing you to check your tool set ups and reference positions as well as your programmed toolpaths.

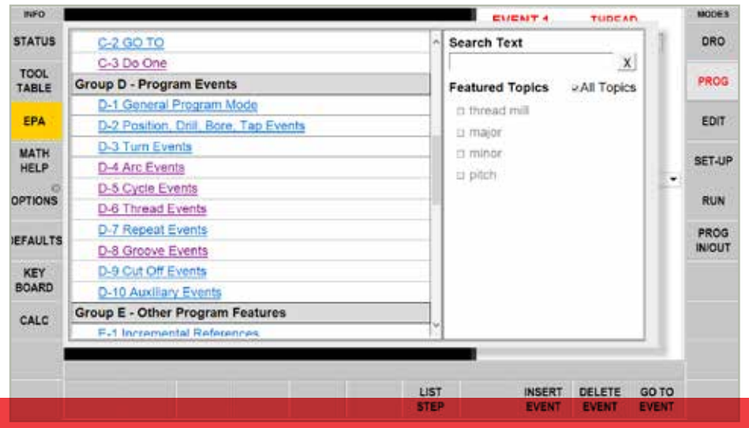
Cycles



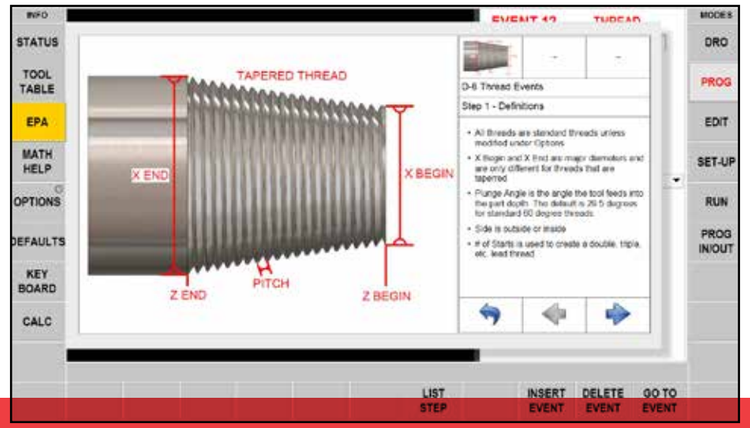
With most CNCs you must define all the toolpath for your part. But with the powerful cycle event of the ProtoTRAK RLX, you simply define your part geometry and the dimensions of your stock. The toolpath is generated for you automatically.

Enhanced ProtoTRAK Assistance (E.P.A.)

The ProtoTRAK RLX helps you use itself



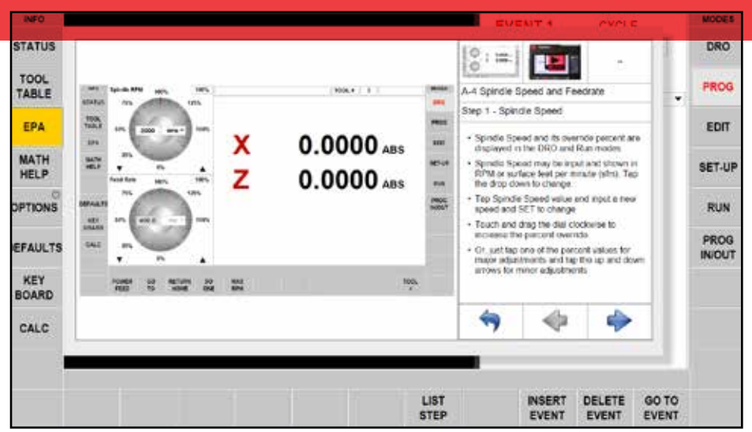
The EPA will help you get the most out of your ProtoTRAK RLX. It is context-sensitive information that you access by tapping the EPA Info key.



With EPA, you're never stuck! Diagrams will guide you through some of the more complex prompts.

Bulleted instructions provide you with a summary of what to do.

Screen shots help you apply the instructions right away because they mimic what you are looking at when you needed help.



Videos supplement the help when nothing else will do.

EPA

Whether you need to learn something new or want to double-check yourself just to be sure, the EPA will help you keep making parts.

The EPA is an extraordinary resource that we will continue to refine and expand over time. You will have access to additional EPA content through software updates. The updates to the EPA that help you run the ProtoTRAK will be at no charge. It is a commitment to your satisfaction that you can only find in a ProtoTRAK.

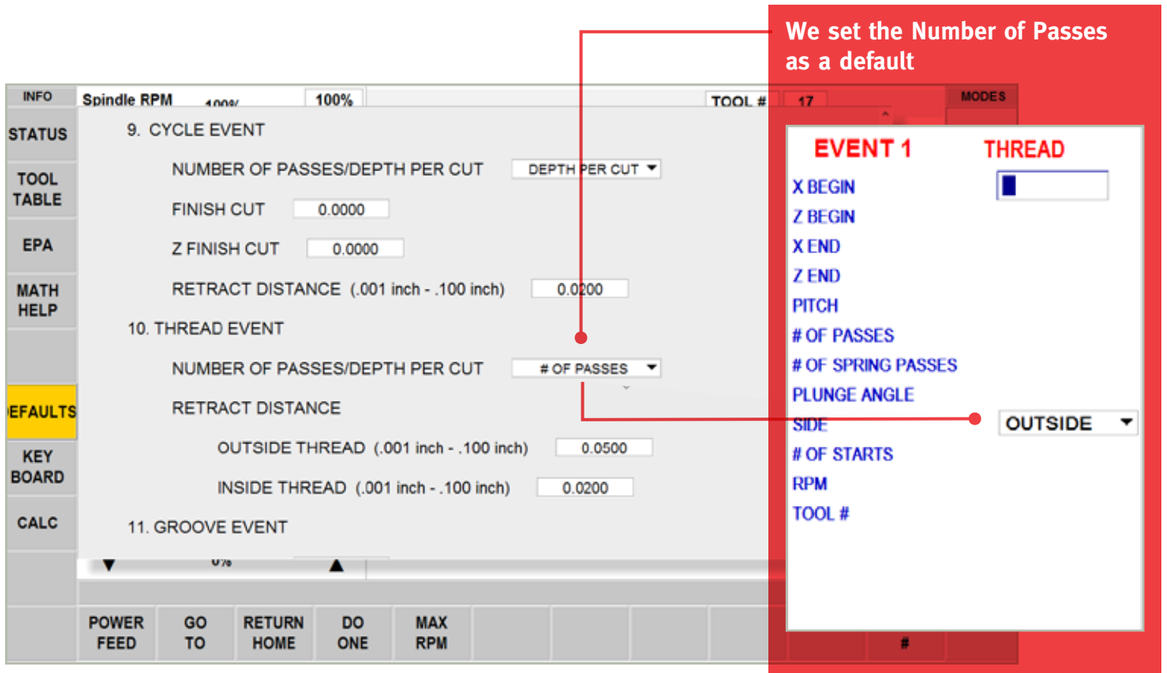
Check with us at www.trakmt.com/RLX to stay on top of what is happening with this tremendous new feature that you won't find anywhere else!

Make it personal with DEFAULTS

The ProtoTRAK RLX is the only CNC that you can mold to your style

You have a style. The work you do, the material you cut, the tooling you use, they all make up your style. The ProtoTRAK is the world's only CNC that you customize to your style. You do this easily by setting Defaults.

Setting Defaults makes programming even easier by loading in your preferences as you program. Once you select the event, your preferences are already there for you. If you're mentoring someone who is new to the craft, you can set the Defaults to help your student work within the parameters you define.

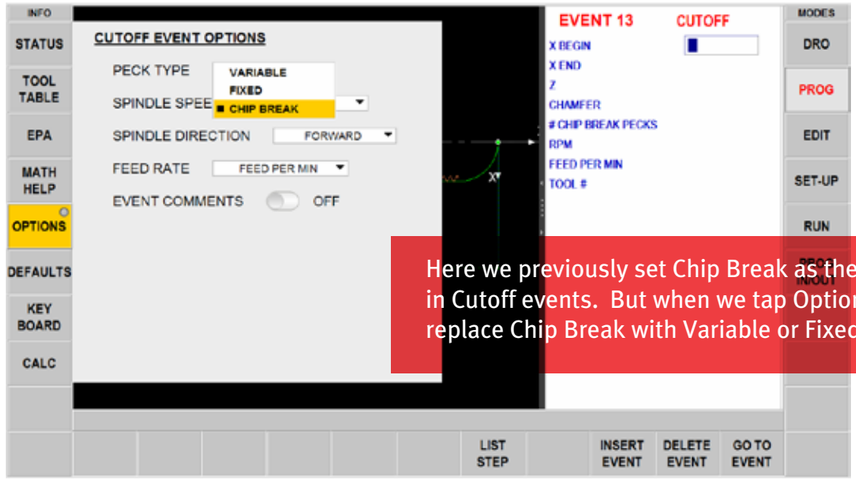


We set the Number of Passes as a default

Now when we program, those values are already there.

Change Defaults whenever it suits you

You're not stuck with the settings you make. You can easily change the preferences by entering another value at the prompt or tapping Options. If you wish to set a new Default, simply select the Defaults Info Key and enter the preference.



Here we previously set Chip Break as the default for the peck type in Cutoff events. But when we tap Options, we can choose to replace Chip Break with Variable or Fixed for this event.

You don't have to set every Default, we've set the most common ones here at the factory. But if you choose, you can use Defaults to:

- Set Feedrate programming to feed per Minute or Revolution.
- Set spindle speed values to RPM or Surface Speed.
- Default to either Conrad or Chamfer for connective moves.
- Set roughing passes in Cycle to number of passes or depth of cut.
- Start up in Inch or mm operation...
- ...and more!

You will love how easy it is to work with Defaults and how much time they will save you in programming, but there is only so much we can show you on a piece of paper. See our website at www.trakmt.com/RLX or call for a Demo in your shop or our showroom. Or just give your TRAK Machine Tools Sales Rep a few minutes the next time he comes by. Chances are he has a Demo Box with him!

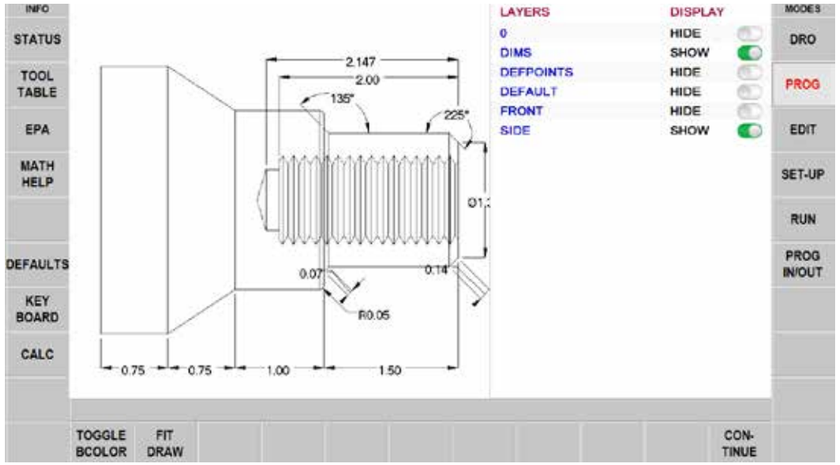
DEFAULTS make programming even easier.

DXF Converter

A simple process you control

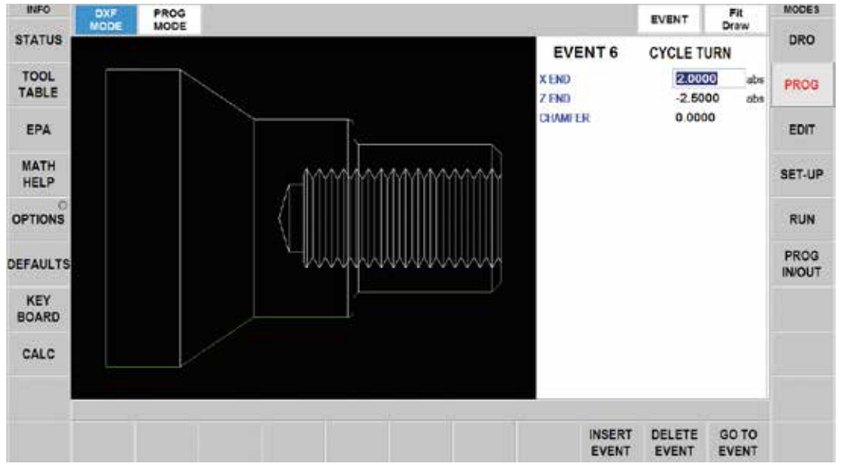
Layer Selection

- View the entire file and select the layers you want to machine



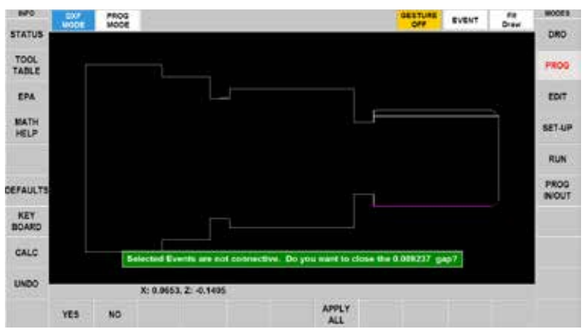
Interactive, Prompted Selection of Geometry

- Program events in the order you choose
- Once the event type and dimensions are loaded it's easy to fill in the prompts



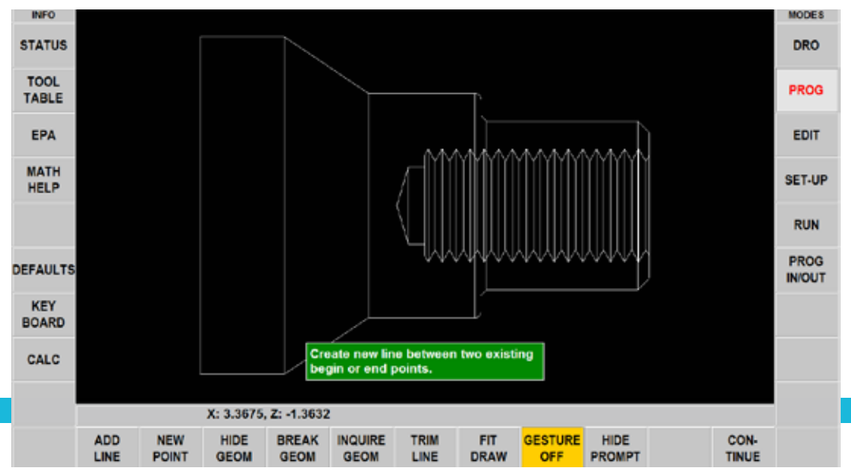
Chaining

- Program the entire geometry of Pocket or Profile peripheries with just two clicks - tell ProtoTRAK where to start then tell it which direction to go. The rest of the connected events are loaded automatically
- The twelve events below were programmed easily by clicking two lines

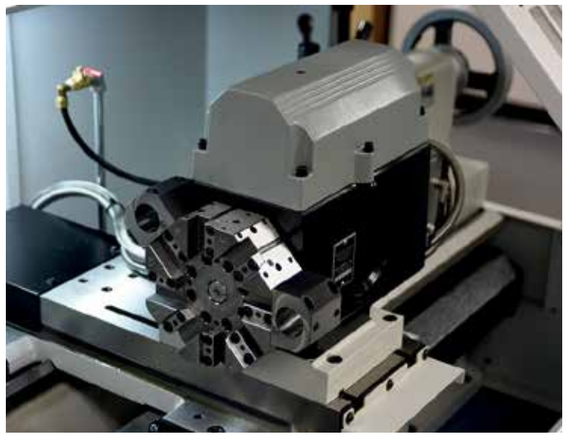


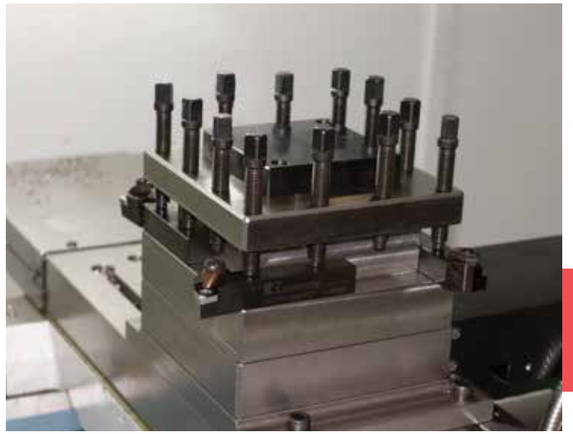
Line Editing

- If lines drawn in a DXF file can't be machined as drawn, the DXF converter enables you to insert or hide lines to get past these problems. No need to go back to the CAD department



Lathe Options





All New Design

Factory-direct Support
Easy programming for automatic tool changes

TRAK 8-station Big Lathe Turret

Lathe (RX)	Tooling
30120	1”
3075	1”

- Eight stations
- Coolant supplied at each tool
- Hydraulic clamping

TRAK 8-station CNC Turret

Lathe (RX)	Tooling
1630	3/4”
1630HS	3/4”
1845	3/4” or 1”
2470	1”

- Eight stations
- Coolant supplied at each tool

TRAK 4-station CNC Turret

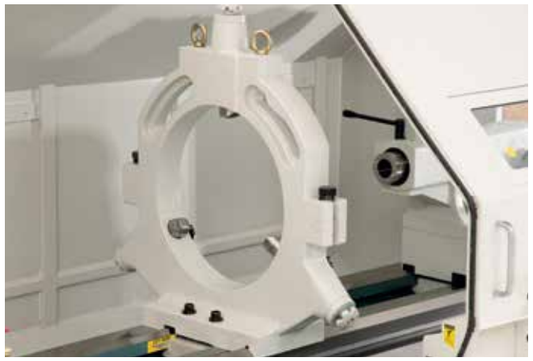
Lathe (RX)	Tooling
1630	3/4”
1630HS	3/4”
1845	3/4” or 1”
2470	1”

NOW AVAILABLE: Optional boring bar/drill holder kits are available for the 4-station turret for either 3/4” or 1” tooling.

Buck® Chuck

- Direct mounting, featuring separate top jaws and master jaws
- Chucks offered for each model are rated from the maximum RPM of the lathe

TRL Model (RX)		Through Hole
1630	8" D1-6	2.36"
1630HS	6" A2-4	1.77"
1845	8" D1-6	2.36"
2470	12" D1-8	4.16"
3075	20” A2-11	6.30”
30120	20” A2-11	6.30”



Steady Rest

Model (RX)	Diameter	Type
1630	.500 to 5.75"	roller
1630HS	.500 to 5.75"	roller
1845	0.4 to 7.87"	roller
2470	1.5 to 8"	roller
3075	3 to 8” 8 to 15”	roller
30120	1.18 to 11.02” & 10.43” to 21.65”	roller

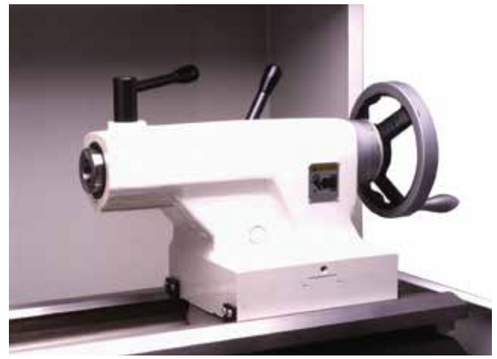
*3075 and 30120 lathes comes with 2 sets of fingers

Rear Chuck

TRL Model (RX)	Through Hole	
3075	18” A2-11	6.1”
30120RX	16" A2-11	6.30"

- Both the front and rear chucks of the TRL30120RX are balanced at the factory when purchased with the machine.

  If you buy your own chuck it will need to be balanced



Tailstock

- Optional for models 1630RX and 1630 HSRX
- Standard on all other lathe models

Lathe Options

Tooling Kit

- Dorian brand tooling kit
- Quick, easy tool changes
- Repeatable to .001”

Model (RX)	Tooling
1630	3/4"
1630HS	3/4"
1845	3/4” or 1"
2470	1”
3075	1.25”
30120	1.25”

The tooling kit includes:

- A quick-change tool post
- 4 each 3/4" or 1" square tool holders for turning, facing and boring
- 1 each boring tool holder:
  3/4" tooling kit – 1" holder
  1" tooling kit – 1.25" holder

Collet Closer

- 5C collet closer
- Extended taper mount nosepiece
- Available for models 1845RX, 1630RX, and 1630HSRX
- Not available for 2470RX, 30120RX or 3075RX

Remote Stop/Go Switch

- A hand-held switch to stop and continue program run

Coolant Pump

- May be configured to operate as commanded by the Accessory Key on the ProtoTRAK RLX front panel

Follow Rest

- Solid brass nib type

Model (RX)	max workpiece dia. (inches)
1630	5"
1630HS	5"
1845	3.94"
2470	6.5"
3075	5.5”
30120	7.87”

Faceplate

Model (RX)	Diameter
1630	14”
1845	14”
2470	20”
3075	30”
30120	30”

Work Lamp

- Mounts on the underside of the chip enclosure

The RX Family of Lathes

1630RX

- 16” swing, 30” between centers
- Spindle through hole of 2.12”
- Ideal for small parts, but a generous swing for versatility
- 150-2500 rpm

High Speed Version Available:

1630HS-RX

- 150-4000 rpm
- Spindle through hole of 1.57”

Plus the same great features found on all our lathes:

- ProtoTRAK RLX CNC
- Manual or CNC operation
- Electronic hand wheels and jogstick
- Brushless servo motors
- Inverter-duty spindle drive
- Programmable spindle speeds
- Constant Surface Speed (CSS) Programming
- Inch Per Revolution (IPR) Programming
- Optional TRAKing for manual control of CNC programs
- Optional Turret for automatic tool changes

The RX Family of Lathes

1845RX

- 18” swing, 45” between centers
- Spindle through hole of 2.36”
- Geared head for excellent performance at slower speeds
- 10 HP continuous spindle motor
- Machine efficiently through the full 18” working diameter
- High (aluminum) and low (steel) speed range settings.
- Better for heavy cuts on parts with diameters over 4”

2470RX

- 24” swing, 70” between centers
- Generous 4.09” spindle through hole
- 15 HP continuous spindle motor
- Geared head for good performance at low speeds
- Tapered roller bearings
- High (aluminum) and low (steel) speed range settings.

Plus the same great features found on all our lathes:

- ProtoTRAK RLX CNC
- Manual or CNC operation
- Electronic hand wheels and jogstick
- Brushless servo motors
- Inverter-duty spindle drive
- Programmable spindle speeds
- Constant Surface Speed (CSS) Programming
- Inch Per Revolution (IPR) Programming
- Optional TRAKing for manual control of CNC programs
- Optional Turret for automatic tool changes

The RX Family of Lathes

3075RX

- 74.8” between centers w/ 72” max cutting length
- Large 6.69” spindle through hole
- 16.1” of cross slide travel
- 30 HP continuous spindle motor
- Interface for rear chuck
- High and low speed range settings.

30120RX

- Gap bed lathe w/ 43.5” swing over 15.5” gap
- 118” between centers w/ 121” max cutting length
- Large 6.30” spindle through hole
- 20.5” of cross slide travel
- 30 HP continuous spindle motor
- Interface for rear chuck
- High and low speed range settings.

Plus the same great features found on all our lathes:

- ProtoTRAK RLX CNC
- Manual or CNC operation
- Electronic hand wheels and jogstick
- Brushless servo motors
- Inverter-duty spindle drive
- Limit Switch
- Programmable spindle speeds
- Constant Surface Speed (CSS) Programming
- Inch Per Revolution (IPR) Programming
- Optional TRAKing for manual control of CNC programs

Specifications Summary for the ProtoTRAK RLX for Lathes

(O) – optional feature

Pendant control hardware
- Two-axis CNC, two-axis DRO
- Electronic Handwheels for manual operation
- 15.6” Touchscreen LCD
- Intel® 2.0 GHz processor
- 4 GB Ram
- At least 32 GB of mSATA SSD
- 5 USB connectors
- 2 Ethernet Ports (1 for user and 1 for motion control)
- Override of program Feedrate
- Override of spindle speed
- LED status lights built into run panel
- E-stop
- Spindle Control (FWD, REV, OFF)
- Feed STOP and GO
- Fine vs Course EHW resolution control
- Accessory button to control coolant or air and AUTO mode in RUN mode
- Headphone jack for video sound (headphone supplied)

Computer Module Control Hardware
- 2 axis motor control – X, Z axes
- 14 inputs
- 9 outputs
- CNC Turret interface

Software Features – general operation
- Clear, uncluttered screen display
- Fly out windows for instant access to features and information
- EPA (Enhanced ProtoTRAK Assistance) for system help
- Programming Defaults to simplify part programming
- Event Options to modify control settings
- QWERTY touchscreen keyboard
- Calculator places data in program for you
- Prompted data inputs
- English language – no codes
- Soft keys - change within context
- Windows® operating system
- Color graphics with adjustable views
- Gestures for pan, zoom, rotate
- Inch/mm selectable
- Convenient modes of operation
- Networking
- Tool Group – Single, Gang, 4-tool or 8-tool CNC Turret
- Tool Library for using tools in multiple programs and DRO
- Program Specific Library to manage tools in the current program
- Tool Set-up with graphics for easy tool definition
- Toolpath graphics with selectable views
- Estimated Run Time clock
- G code file run
- Program storage to USB device plugged into Control Pendant
- Program storage to Network via RJ45 Port
- Convert prior-generation ProtoTRAK programs to current (.PT10)
- Save Temp – saves all current programs, tools and other settings
- Cut, Copy, Delete, Paste of program(s)
- Look - Graphics preview of program files

Info Soft Keys
- Status shows current state of the ProtoTRAK RLX
- Tool Table for instant access to tool set ups
- EPA (Enhanced ProtoTRAK Assistance) help information for ProtoTRAK RLX operation
- Math Help to easily calculate missing print data
- Options appear when available while programming
- Defaults to customize the programming style
- Key board to enter alphanumeric and special symbols
- Calculator for simple calculations
- Warnings appear when you must resolve a condition

DRO Mode Features for Manual Machining
- Incremental and Absolute dimensions
- Override of Axis Feed and Spindle RPM
- Jog at rapid with override
- Powerfeed X or Z
- Programmable Go To dimensions
- Servo return to Home
- Do One - Tapers for any angle
- Do One – Radius
- Do One – Fillet
- Thread Repair (O)
- MAX RPM – set maximum RPM for spindle to run
- Tool offsets from Tool Library

Canned Cycles (Event types)
- Position
- Drill
- Bore
- Turn
- Arc
- Cycle
- Thread
- Thread Repair (DRO Mode, Optional)
- Repeat
- Groove
- Tap (O)
- Cut Off
- Aux Event

Options for the ProtoTRAK RLX

Advanced Features Option
- Verify Make Part – solid model graphics of programmed toolpath
- Event Comments
- G-code editor
- Thread Repair
- Clipboard
- Gang Tool setup
- Custom Thread Event
- Tap event
- Search Edit

Auxiliary Output Option
- Programmable Output signal

DXF File Converter Option
- Import and convert CAD data into ProtoTRAK programs
- DXF or DWG files
- Chaining
- Automatic Gap Closing
- Layer control
- Part alignment
- Feature analysis (circle/arc radius and position)
- Simple CAD construction/editing tools
- DXF-output capability
- Easy, prompted process you can do right at the machine

TRAKing®
- TRAKing® of programs during program run
- Go To Dimensions in DRO Mode

TRAKing® - Our favorite option

You control the programmed toolpath as you crank one of the handwheels. Get a demo to see for yourself the dramatic impact this can have on your productivity.

Offline Programming Option
- ProtoTRAK RLX user interface for Windows PC
- Program parts and simulate CNC Run
- Modify files from current and former ProtoTRAK models

MTConnect
- Machine networking through ProtoTRAK® ethernet connection or USB Wi-Fi adapter
- Collect machine data throughout shop
- Monitor machine status, receive notifications and analyze data throughout your machines’ history

USB Memory option
- The USB Memory option consists of an industrial-grade 2G Delkin Thumb drive. Don’t let the relatively small capacity fool you, this thumb drive is unsurpassed for reliability and speed of file access. It is the storage of choice for our own software engineers.

RLX Lathe Specifications

For full, updated specifications see trakmt.com/TRLRX

Model	1630RX / HS	1845RX	2470RX	3075RX	30120RX
Capacity					
Height of Centers	8”	9”	12”	15”	16.5”
Distance Between Centers	30”	45”	70”	74.8”	118”
Swing Over Bed	16”	18.1”	24”	30”	33”
Swing Over Saddle Wings	16”	17”	24”	28”	33”
Swing Over Cross Slide	8.6”	9.13”	14.5”	19”	21.2”
Cross Slide Travel	8.5”	10.6”	12.5”	16.1”	20.5”
Tool Section Max.	3/4”	1”	1”	1.5”	1.5”
Coolant	8 gal.	13 gal.	15 gal.	47 gal.	48 gal.
Oil Pump – Way Lubrication	2 liter	2 liter	2 liter	2.3 liter	2 liter
Oil Reservoir – Headstock	1.5 gal.	1.85 gal.	5.3 gal ~6.3 gal w/ oil cooler option	6 gal.	8.85 gal.
Rapid Speeds (ipm)	400 ipm on Z axis, 200 ipm on X axis				
Bed					
Width	12.6”	13.4”	14.57”	18”	19.69”
Height	12.6”	12.4”	15”	15.75”	18.7”
Headstock					
Spindle Nose	D1-6 / A2-4	D1-6	D1-8	A2-11	A2-11
Spindle Through Hole	2.12” / 1.57”	2.36”	4.09”	6.69”	6.30”
Spindle Taper	MT6 / MT5	MT6	MT8		Non MT Taper
Taper in Reduction Sleeve	n/a	MT4	MT5		MT6
Spindle Diameter Front Bearing	3.15” / 2.56”	3.35”	5.51”	8.66”	7.87”
Number of Bearings	2 / 5	2			
Spindle Speed Range (RPM)	150-2500 / 4000	80 – 850, 250 - 2500	40-670, 100-1800	30-300, 100-1000	20-415, 40-1300
Spindle ID Thread on end of Spindle	M56 X 2 MM Pitch	N/A			M185 X 3.0
Tailstock					
Quill Travel	5.75”	6”	8.5”	8”	
Quill Diameter	2.36”	2.56”	3.5”	4.875”	4.13”
Quill Taper Hole	MT4		MT5	MT6	

Model	1630RX / HS	1845RX	2470RX	3075RX	30120RX
Spindle Motor					
H.P.	7.5	10	15	30	
Voltage	200 to 240			432 to 528	
Amps, Full Load	44	54	75	71.6	62
Phase, Hz	3/60				
Dimensions					
Net Inches L x W x H	82 x 45 x 72”	88 x 55 x 70”	129 x 84 x 79”	170 x 82 x 77”	213 x 87 x 80”
Ship Inches L x W x H	87 x 45 x 70”	91 x 52 x 79”	134 x 65 x 79”	225 x 95 x 88”	223 x 91 x 111”
Weight					
Net / Ship	2750 / 3420 lbs	3285 / 3800 lbs	6500 / 6900	15430 / 16530	18920 / 19270
Other					
Coolant Pump Motor, H.P.	1/8			3/4	1/4
Spindle Motor Brake	Dynamic Braking				
Way Surface Hardness	400-450 HB	480 – 560 HB			
Headstock Lubrication	Oil Bath /Grease*	Oil Bath			
Options					
Tooling Kit	3/4”	3/4” or 1”	1”	1.25”	
Chuck	8”, D1-6 / 6”, 2-4	8”, D1-6	12”, D1-8	20”	
5C Collet Closer	D1-6 / A2-4	D1-6	N/A		N/A
Turret Option	3/4”, 8-Position 3/4”, 4-Position	3/4 or 1”, 8-Position 3/4 or 1”, 4-Position	1”, 8-Position 1”, 4-Position	1”, 8-Position	1”, 8-Position

Specifications may change – please see website for most up to date information

Also see www.trakmt.com/RLX for photos and complete description

Get to know the new TRAK RX Lathes featuring the ProtoTRAK RLX today!
Visit www.trakmt.com/RLX
Call for a demo in your shop at 800-421-6875
Visit one of our showrooms nationwide www.trakmt.com/locations
Sign up for an Open House or Trade Show event near you: www.trakmt.com/events

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