Proposal for a Recondtioned Kellenberger 175/1000 Universal Grinder

*Not actual machine, but representative model

Proposal presented

Complete Reconditioned KELLENBERGER "Kel-Varia" Model UR 175-1000

WE Guarantee this Machine to hold to or better then New Machine from the factory

14" X 40" CNC Universal Cylindrical Grinder, with Power Lift Manual B Axis, ID Attachment, New MachMotion Control system, Mechanically Reconditioned with New Paint

Manufacturer: KELLENBERGER
Model: UR 175 X 1000
Mechanically Reconditioned: Guarantee this Machine will grind to factory tolerances
CNC Controls: Completely new CNC control system

Specifications:

SWING OVER TABLE	13.74" (Optional Riser to 17.6")
DISTANCE BETWEEN CENTERS, MAX.	39.4"
WEIGHT CAPACITY BETWEEN CENTERS	330 LBS
GRINDING WHEEL DIAMETER, MAX.	15"
GRINDING WHEEL WIDTH, MAX.	2.5"
WORKHEAD SPINDLE NOSE	5MT
WORKHEAD SWIVEL RANGE	-30 TO + 120-DEGREES
TAILSTOCK INTERNAL TAPER	4 MT
UPPER TABLE SWIVEL RANGE	0 TO 9-DEGREES
LOWER TABLE TRAVEL, MAXIMUM (Z-AXIS)	45"
CROSS SLIDE TRAVEL, MAXIMUM (X-AXIS)	12.59"
PERIPHERAL GRINDING WHEEL SPEED	6300 SFPM
WORKHEAD SPINDLE SPEEDS, RANGE	5 TO 500 RPM
FLOOR SPACE REQUIRED APPROXIMATE	12' X 7'
WEIGHT APPROXIMATE	11,025 LBS
HYDROSTATIC WAYS	

Equipped With:
New MachMotion CNC controls
ID Spindle attachment
Sound enclosure w/ sliding doors
Coolant paper filtration system

Proposal Summary, Describing Machine Reconditioning

Complete Machine Mechanically Reconditioning Includes the following:

1.0 MECHANICAL

1.1 General

- Produce detailed production schedule.
- Completely dismantle machine.
- Clean and inspect individual assemblies/ components.
- Provide detailed written report of any unforeseen issues.

1.2 Machine base and swivel table

- Rough mill existing bearing material on underside of reciprocating table.
- Supply and install new Turcite to underside of reciprocating table.
- Finish mill new Turcite on underside of reciprocating table and mill oil grooves.
- Match grind table base to match the turcite under the reciprocating table.
- Grind reciprocating table top while on machine base.
- Grind swivel table top and dovetails.
- Hand scrape turcite for proper surface contact and angular bearing fit.
- Recondition ball screw and bearing packs to ensure factory performance is achieved (supplied free issue)

1.3 Headstock

- Completely disassemble and inspect all bores, tapers and shafts.
- Replace all bearings and seals.
- Hand scrape for proper surface contact and angular bearing fit.
- Re-assemble and test
- Check geometry

1.4 Footstock

- Completely disassemble and inspect all bores and tapers.
- Replace all bearings and seals.
- Hand scrape for proper surface contact and angular bearing fit.
- Adjust center height to headstock.

1.5 Wheel head Assembly

- Grind all wheel head guideways.
- Hand scrape for proper surface contact and angular bearing fit.
- Install new way wipers.
- Inspect wheel head assembly:
    - Visual inspection
    - Proper lubrication
    - Run-out
- Inspect manual B axis

1.6 Hydraulics & waylube

- Clean and inspect existing hydraulic power unit.
- Inspect all existing hard piping.
- Inspect way lube meters.
- Inspect copper way lube lines.
- Inspect all way lube hoses.
- Confirm way lube delivery to each lube point on machine.

1.7 Way covers and guarding

- Inspect and repair all guarding.
- Remove all way covers from machine.

- Straighten, polish, and replace all wipers and wear strips on each cover.
- Test operation of each assembly.
- Install all way covers on machine.

1.8 Miscellaneous

- Paint entire machine as per customer specification.

New Control System Summary

MachMotion 2000G Series 2 Axis Grinder Controls

- Large 21" Wide HMI with touch screen gives the operator easy to use Windows-style one page navigation
- Rugged steel CNC control interface, liquid & dust resistant
- Easy machine parameter back up on USB; never lose machine parameters
- Unlimited part file storage
- Minimal operator training required / minimal learning curve

Network Capabilities

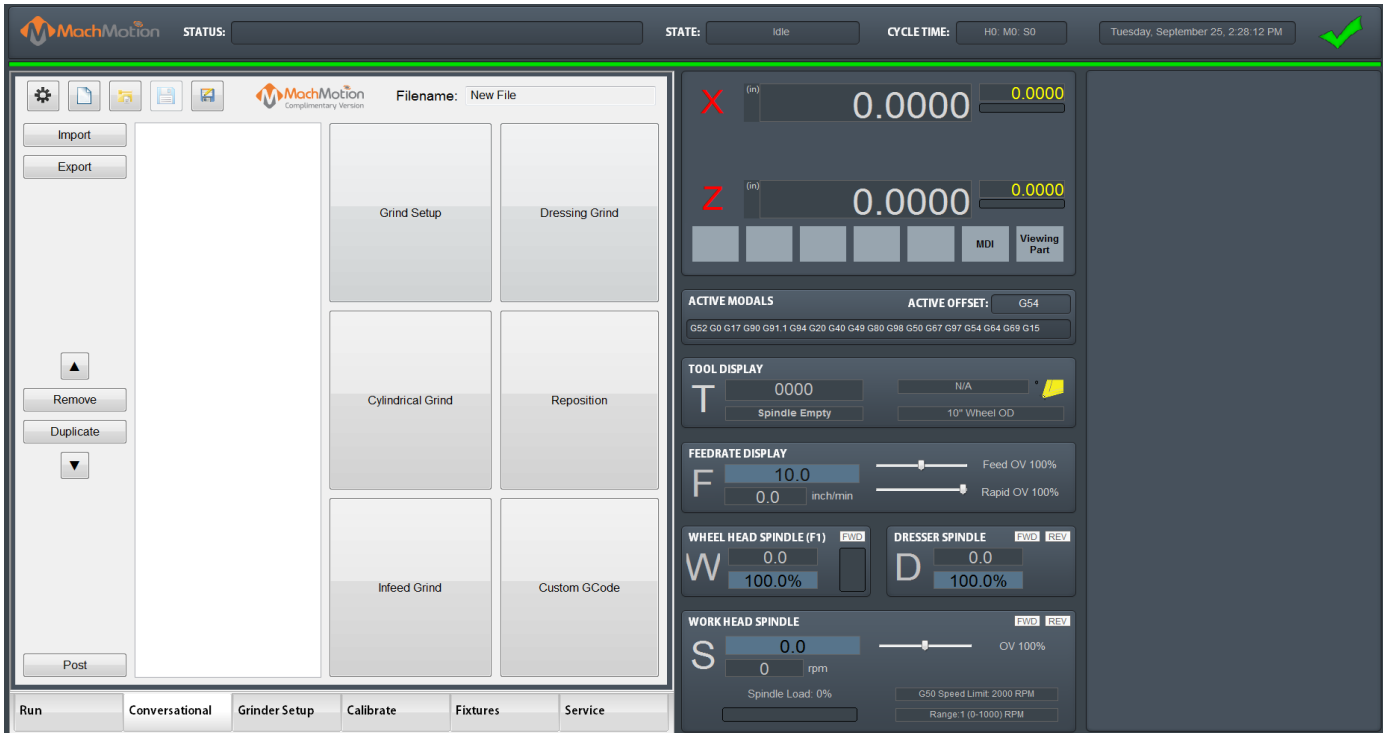
- Windows Ethernet Compatible; network to office (Windows Embedded)
- Wi-Fi
- External USB port, easy file transfer

User Friendly Software Interface

Our user friendly, tab-based interface makes it easy to switch between, Machine Run Screen, Conversational, Grind Setup, Calibrate Screen, Fixtures and Service Tab. Using the Touch screen you can access each page with one click.

NOTE: Specialty Process Conversational Screen options available.

Example Conversational Programming User Interface



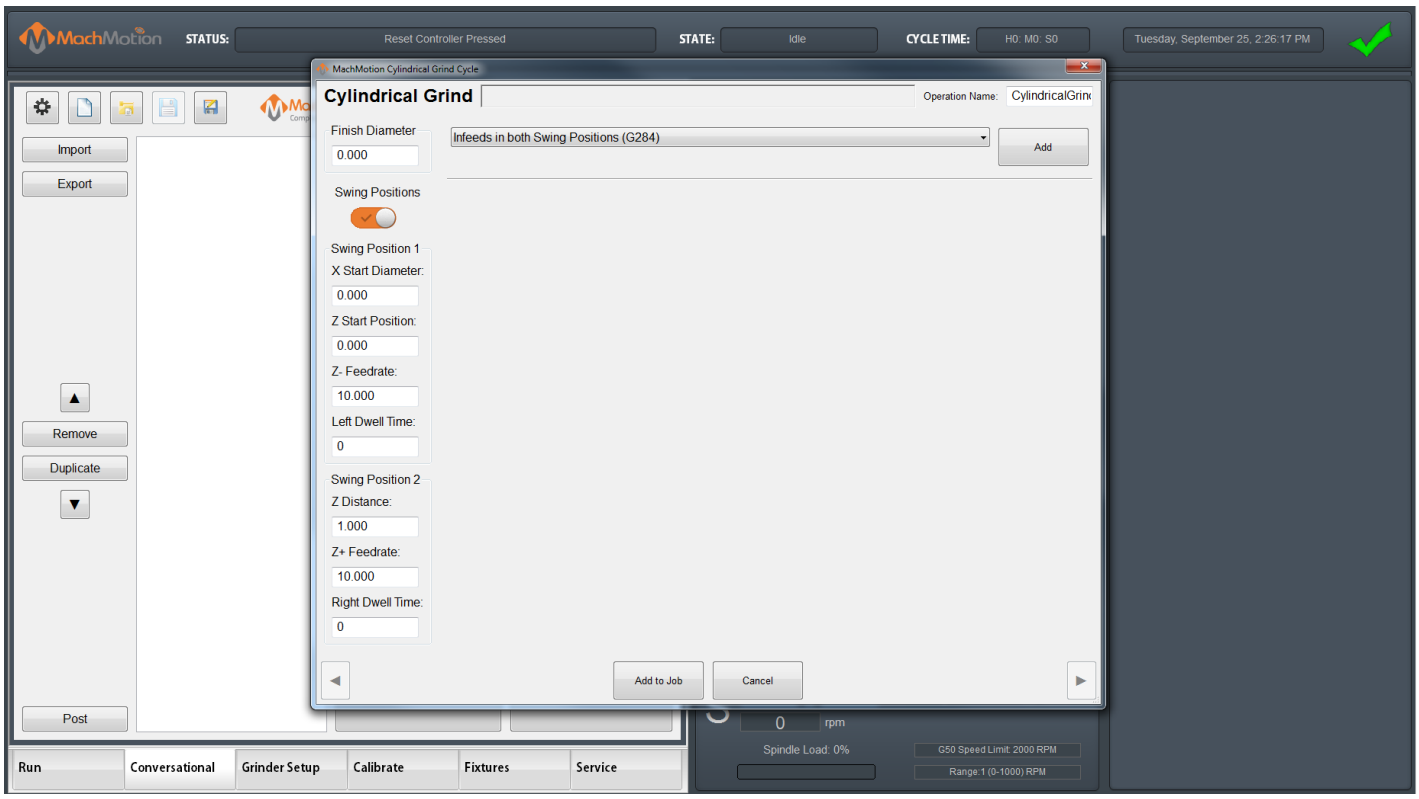
Grind Cycles Are Easily Programmed

- Saved as job file; Add, remove, or modify any operation at any time.
- Import and export operations; Reuse common features in all your parts
- All operations visualized in operation tree; Change order or disable any operations
- Part files saved and then called up and loaded with barcode scanner

Fast Part Programming at Machine with a Blue Print / Part Drawing

- Operator can walk up to CNC grinder with a blue print in hand, enter in the part dimensions in to the conversational interface.
- The conversational interface will create the grind cycle instantly.

- Visual Tool Path on run screen making it easy to verify correct grind cycle



G-Code Grind Cycle interface included

MachMotion Controller has built in ready to go Macro-B OD/ID Grind cycles. Cycles included (Macro-B Type Cycles):

Grinding Cycles

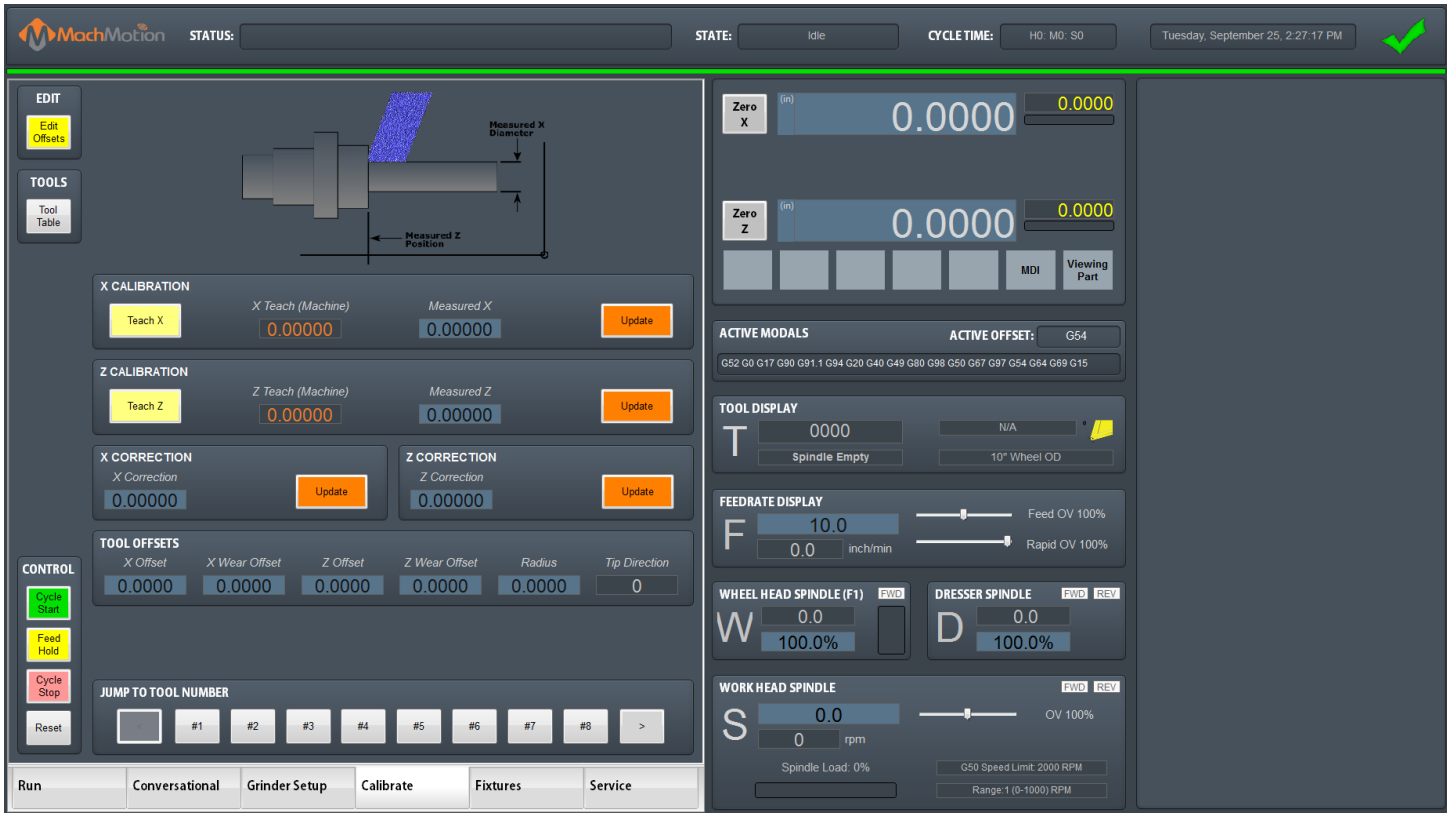
Cycle-271 Left Side Wheel Definition
Cycle-272 Right Side Wheel Definition
Cycle-274 Multiple Plunge Grind
Cycle-276 Plunge Grind Start Position
Cycle-280 End Plunge Grind
Cycle-281 Traverse Grind Left Infeed
Cycle 282 Traverse Grind Right Infeed
Cycle-284 Traverse Grind Left Right Feed
Cycle 281 - Infeeds in the Swing Position 1
Cycle 282 - Infeeds in the Swing Position 2
Cycle 284 - Infeeds in both Swing Positions

Dressing Cycles

Cycle-260 Dressing the Circumference of the Wheel
Cycle-261 Dressing the Left Face of the Wheel
Cycle-262 Dressing the Right Face of the wheel
Cycle-263 Dressing the Wheels Circumference and Left Face

Cycle-264 Dressing the Wheels Circumference and Right Face

Example Calibrate Part Setup Screen



Included Marposs Acoustic Sensors "Gap & Crash Control

- Optimizes Cycle times and prevents Machines Crashes
- Gap Sensor for ID Spindle and OD spindle
- OD Grind Acoustic Sensors

New AC Brushless Yaskawa Servos

- X Axis
- Z Axis

Onsite power up and Training

- Power up and Run-offs
- Operator Training
- Onsite 1 week

- Travel costs (e.g. flights, housing, car rental) included
  NOTE: Tech will work Monday – Friday; weekend charges will apply if required

Warranty: One year on all parts and labor
Support: Free Remote Support

Reconditioned Grinder with the latest MachMotion CNC Grinding Control system

Grand Total:

…….$215,000

*Price contingent upon used machine availability at PO acceptance

FOB: Newburg, MO
Excludes shipping, taxes, duties, or any other fees

Terms and Delivery
40 % deposit with confirming purchase order, due upon receipt
40 % due upon receipt after run off and acceptance
20 % Net 30 days after delivery to customer plant

Delivery: 12 - 14 weeks, subject to actual shop load at time of order
Warranty: One year on all parts and labor
**Machine warrantied by rebuilder, control system warrantied by MachMotion*

Freight: Freight and rigging is the responsibility of the customer
Insurance: The buyer is responsible to ensure that the machine or part has adequate insurance coverage while in transport and being reconditioned

This quote is valid for 30 days.

Machine Option:
Riser Blocks: SWING OVER TABLE 17.6" US$10,000