



Contract for Purchase of LA3250

This contract covers the purchase one (1) LA3250 4-Axis Advanced Lathe as described in proposal 17754 for the amount of \$100,000.00 USD by the Department of Biology at Jan Evangelista Purkyne University, Horeni Street 13, 400 96 Usti nad Labem, Czech Republic (TIN: 4455601) from Comco, Inc at 2151 North Lincoln Street, Burbank, CA 91504 (TIN: 95-2458657).

The University of J.E. Purkyne in Usti nad Labem (CUSTOMER) agrees to all of the terms, the timeline, the warranty, the technical specifications, the features and modifications and all other information as described in proposal 17754, which includes the following requirements:

Shipping and Delivery

Comco agrees to ship the 4-Axis Advanced Lathe, LA3250, and all its components so that it is received in Usti nad Labem by 12 December, 2012.

Shipping is „DDPÚstinad Labem,Českémládeže 8, INCOTERMS 2010“. Shipping costs include shipping, tax and duties and are estimated to be \$4,000.00 USD. These costs will be prepaid by the customer and included in the final invoice.

Ordered Receipt and Payment Timeline:

In order to meet the December date of receipt:

1. The order needs to be received by Comco by 17 October, 2012.
2. The invoice for 20% payment of the total price will be issued the same day and is due upon receipt.
3. The machine will be completed in house prior to 26 November, 2012, and the second invoice for 70% of the total price issued.
4. The second payment must be received by 29 November, 2012.
5. The lathe will ship by 03 December, 2012 to meet the required delivery date.
6. The third invoice for 10% of the total price will be issued when the system ships and is due net 30.
7. The cancellation penalty on this order is based on work completed-to-date, but will be no less than 20% of the contract value.



Facilities

The Customer agrees to provide the following at its facility prior to machine operation:

1. 1,000 SCFM of dust collection
2. 10-12 SCFM of clean dry air at 90-140 psi
3. 2.0 Amps at 230v/50Hz

Dimensions

The customer agrees to the size of the system being provided by Comco, as described in proposal 17754, which is no more than 22 cm wide x 76 cm deep x 173 cm tall, access area not included. The customer agrees to place the machine so that the back of the system will be located at least 1' from the wall.

Assembly and Installation

The customer understands that the Advanced Lathe, LA3250, will ship in 2 crates, one containing the chassis and the other containing the integrated table. Comco, Inc. will provide the customer with instructions for assembly and installation. The customer agrees that assembly and installation are the responsibility of the customer.

Warranty

The customer agrees to the warranty as provided under proposal 17754.

Acceptance

The customer understands acceptance of the system will be performed at Comco prior to shipment. The system will be tested to ensure it meets the performance criteria of the contract. Tests will be documented and provided to University of J.E. Purkyne.

Arbitration Clause

All disputes arising out of this contract or related to its violation, termination or nullity shall be finally settled under the Rules of Arbitration and Conciliation of the International Arbitral Centre of the Austrian Federal Economic Chamber in Vienna (Vienna Rules) by one or more arbitrators appointed in accordance with these Rules.

Agreement

Signing of this agreement confirms acceptance of this contract and thus proposal 17754. In order to meet the requirements specified by this contract, payments must be made by the agreed dates listed on the contract and the proposal or prior. Failure to make these payments will result in the system shipping late and not arriving by 12 December, 2012. Comco will not be held liable for this delay.

Signed: _____



Colin Weightman

President

Comco, Inc.

Date: 10/16/12

Signed: _____



Name: _____

prof. RNDr. René Wokoun, CSc.

Title: _____

rektor

Jan Evangelista Purkyně University

Date: 19. 10. 2012

UNIVERZITA J. E. PURKYNĚ V ÚSTÍ NAD LABEM

111 Univerzita J. E. Purkyně
v Ústí nad Labem

400 96 Ústí nad Labem, Hořeni 13
REKTORÁT



COMCO INC. 2151 N. Lincoln St. / Burbank, CA 91504
818-841-5500 / 800-796-6626 / www.comcoinc.com

International Wire Transfer Information

Beneficiary Name and Address:

Comco Inc
2151 North Lincoln Street
Burbank, California 91504 USA

Beneficiary Account bank name and address:

American Business Bank
523 West 6th Street
Los Angeles, CA 90014

Telephone (213) 430-4000
Fax (213) 627-2576

Beneficiary Account Number: 03-201740
Beneficiary ABA (NSC) Number: 122042807
Beneficiary Swift Code: ACBBUS6L

Intermediary Bank:

Citibank N.A.
New York, NY

Account Number: 36276383
Swift Code: CITIUS33

Payable in: US Dollars

A handwritten signature in blue ink, appearing to read "Christine Lyons".

Controller



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Jan Maly
Jan Evangelista Purkyne University
Department of Biology
Horeni Street 13
400 96 Usti Nad Labem, Czech Republic

July 17, 2012

Quote#: 17754

Thank you for contacting us, regarding your potential need for an automated micro-precision sandblasting system. Based on our discussions I have put together budgetary pricing on a version of our LA3250 Advanced Lathe.

Unit: **LA3250**

Price: **\$100,000 (One Hundred Thousand Dollars)**

This system will be built on the foundation of our Advanced Lathe. It is designed to conform to the basic machine specifications. The system proposed for your part processing would utilize 4 axes of motion; X, Y, Z, and W.

The Advanced Lathe is our latest generation of micro-abrasive blasting equipment integrated into an automated platform. This unit is specifically designed to run in production environments; withstanding the effects of our harsh abrasives. The system is Rohs and CE compliant.

The abrasive stream on the lathe will be supplied from 1 AccuFlo AF10 blaster equipped with an electronic regulator. This is our most advanced microblaster. The AF10 delivers a more uniform abrasive stream giving you the control necessary for microfluidics applications.

Programs: Purchase of the lathe includes the necessary programming for one of your products. We will design and develop a method of processing that meets your product specifications. Instruction on program generation will be covered during the training class. If necessary we can also provide a quotation for additional program development.

Training: One day of training is included with the purchase of an Advanced Lathe. The training is held at the Comco factory during Acceptance Testing prior to shipping the system, covering machine installation, programming, maintenance and operation. We will also process parts for the acceptance of this machine.

Terms: 20% Due when order is placed.
70% Due upon acceptance at Comco by your company, prior to shipment.
10% Due 30 days after the LA3250 arrives at your facility.
Prices are USD. Payments via wire transfer.

Parts and assemblies contained in this custom system remain the intellectual property of Comco Inc. Unless specifically listed you will not be provided with detail part drawings or CAD files for any element of the custom machine.

Delivery: Based on the current backlog for equipment I anticipate that we will have a lathe ready for acceptance 8-10 weeks after your order is placed, however orders are prioritized based on the date the PO is received. All goods are shipped collect FOB Burbank, CA.

Facilities: (Not provided by Comco)
12-16 SCFM of clean dry air at 90-140 psi
3.5 Amps, 110v/60Hz
1000 SCFM of dust collection*

*A suitable dust collector for use with the Advanced Lathe would be the DFO2-2 or DFO3-3 unit manufactured by Donaldson. We would recommend sourcing this unit locally.

Warranty: Comco's standard warranty is attached

Validity: Pricing for the Advanced Lathe as listed in this proposal is valid through October 31, 2012.

Cancellation: Should an order be placed and subsequently cancelled, the cancellation penalty will be determined based on progress to date. The minimum charge will be 20% of the purchase order.

Please contact me if you have any questions regarding this quotation. I can be reached at (818) 841-5500 ext. 107.

Best Regards,

Sylvia Rosales
Comco Inc.



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The Comco Warranty

Comco warrants that the LA3250 Advanced Lathe will be free from all defects in material and workmanship under normal use for a period of one year from the date of purchase or 2,000 hours of normal operation, whichever comes first.

The warranty period begins when the equipment ships from the Comco facility and applies to the original owner only. Comco is not liable for damages from any cause or use of such equipment beyond the cost of repairing any defective LA3250 parts.

If the equipment fails to perform satisfactorily during the warranty period, Comco has the option to do any one of the following: 1) Send replacement parts to the customer to be installed by the customer; 2) Repair the unit at the customer's facility; or 3) Request that the unit be returned to the Comco factory. Comco shall furnish any replacement parts without cost, F.O.B. the Comco factory in Burbank, California, provided that Comco is notified of the defect within the warranty period. Any defective parts shall be returned to Comco for inspection and analysis.

Exclusions

The above warranty does not apply to defects or problems resulting from improper or inadequate maintenance by the customer; unauthorized modification or misuse; failure to follow the operating instructions; or the use of any supplies or parts including, but not limited to, nozzles, powders, and attachments not manufactured or supplied by Comco.

The warranty also does not cover problems resulting from improper or inadequate facilities (contaminated air, improper power) or items that should be expected to wear in normal operation, such as nozzles, abrasives, tubing, or fittings.

This is Comco's only warranty and is in lieu of all other warranties of merchantability and fitness for any particular purpose. No representations or warranties are authorized except as herein stated.



Comco LA3250 Advanced Lathe Technical Specifications

Programming	Number of programs per lathe	Unlimited
	Number of subroutines per program	Unlimited
	Number of lines per program	1000 lines x 80 characters when translated for motion control card
Part Tooling	Unique identifiers (max)	128
	Outside diameter Inside diameter	.05 - 6.00 in (1.3 - 152 mm) .20 - 5.50 in (5.0 - 140 mm)
Blast Heads	Unique identifiers Nozzle diameter	15 .018 - .125 in (.46 - 3.2 mm)
	Nozzle quantity	1 - 8
Spindle (W-Axis)	Travel Speed (max) Acceleration (max) Positional resolution (programmable/physical) Positional accuracy Positional repeatability	± Infinite rotations ± 750 RPM ± 30,000 RPM/s .02° / <.50° <.5° <.5°
X-Axis	Travel Speed (max) Acceleration (max) Positional resolution (programmable/physical) Positional accuracy Positional repeatability	10.5 in (267 mm) ± 6.0 in/s (152 mm/s) ± 100 in/s/s (2540 mm/s/s) .000008 in / <.002 in (.00020 mm / <.051 mm) <.005 in (<.127 mm) <.002 in (<.051 mm)
Y-Axis	Travel Speed (max) Acceleration (max) Positional resolution (programmable/physical) Positional accuracy Positional repeatability	5 in (127 mm) ± 3.0 in/s (76 mm/s) ± 100 in/s/s (2540 mm/s/s) .00002 in / <.002 in (.00051 mm / <.051 mm) <.005 in (<.127 mm) <.002 in (<.051 mm)
Z-Axis	Travel Speed (max) Acceleration (max) Positional resolution (programmable/physical) Positional accuracy Positional repeatability	4 in (102 mm) ± 3.0 in/s (76 mm/s) ± 100 in/s/s (2540 mm/s/s) .000005 in / <.002 in (.00013 mm / <.051 mm) <.002 in (<.051 mm) <.002 in (<.051 mm)



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Features and modifications on the Advanced Lathe, LA3250.

The Advanced Lathe represents the latest technology in micro-abrasive blasting and the most effective way to integrate a blasting process into any precision operation.

- **Integrated system** – The Advanced Lathe is built to be compact and self contained. This allows the entire system to be integrated for optimal blasting performance. The blast chamber is easily accessible by the operator and contained to keep the abrasive from contaminating nearby equipment. The air flow through the system was engineered to effectively trap all of the spent abrasive drawing it out to the dust collector.
- **Device processing** – The Advanced Lathe is capable of processing a wide range of part geometries. As devices become more complex our system has been adapted to meet their changing needs. With the integrated motion control system it is able to trace complex patterns on the surface of each part, keeping the nozzles at a constant distance. This is a key factor in maintaining the uniform surface finish.
- **Motion capabilities** – To process devices the Advanced Lathe uses the coordinated motion of 3 or 4 axes to precisely trace the part surface. Each of the axes uses a stepper motor with encoder feedback to direct the abrasive stream. Our standard version of this machine uses X, Z, and W (Theta) motions to handle a part. An optional fourth axis, Y, can be integrated into this system to handle more complex parts.
- **Motion control** – To operate in a micro-abrasive blasting environment a unique electronics package has been developed (TCE). The motion of each axis is controlled by an onboard PC with a Galil motion control card. The TCE package allows the system to trace a sophisticated blast pattern along the surface of a part, ensuring an even finish on your part.

The inherent accuracy of the lathe allows for precise tracking of the nozzle over the surface of your part. This allows us to use multiple nozzles to blast your parts while potentially eliminating the need for masks to be applied. The accuracy of this system also allows us to provide more repeatable surface roughness characteristics.

- **Abrasive protection** – The fine abrasive media that is used with our micro-abrasive blasting systems can easily enter mechanical parts that are not properly protected. Any bearing surfaces that are exposed to this abrasive will quickly wear and lose the ability to hold tight tolerances. Over the past 30 years Comco has developed the skills required to operate moving parts in an abrasive environment, maintaining precision and accuracy for production operations.

Each drive assembly within our system has multiple layers of protection; abrasive resistant components are used, then sealed, and purged with positive pressure to keep abrasive out. Additionally, the Advanced Lathe is separated into two compartments. Abrasive is contained within the blast chamber and, where possible, all electronics and moving parts are kept in a separate control chamber. This chamber is sealed from the abrasive side and uses high-pressure air to purge the cabinet. Drive assemblies that pass through the electronics chamber into the blast chamber are sealed and protected against the damaging environment.

Downdraft airflow is incorporated into the design of the blast chamber. This process allows us to amplify the force of gravity drawing spent abrasive through the floor of the abrade chamber and out to the dust collector. The vertical flow of abrasive through the cabinet limits the overhead slide's exposure to the abrasive.

- **PowderGate abrasive control** – The AccuFlo is now configured with our PowderGate control valves. This valve replaces the standard pinch found on many abrasive blasters and replaces it with a mechanism capable of controlling the abrasive flow internally. In production environments the typical pinch valve will only last 10,000 cycles, the PowderGate has been effectively tested to over 250,000 cycles with no maintenance.
- **Air purification** – On the Advanced Lathe we are including our AD5300-5 air dryer to properly clean and dry the air for your AccuFlo blaster. The fine abrasive that is used for your application is very sensitive to moisture. The abrasive will quickly clump together and not flow properly if the air supply is not properly dried. The membrane dryer allows for effective moisture removal with only a limited amount of preventative maintenance. The dryer can handle up to 20 SCFM.

- **Preventative maintenance** – The TCE architecture offers the capability to monitor a wide range of Advanced Lathe functions. Individual alarms can be turned on and off through the engineering interface. This allows the system to monitor the blaster and trigger alarms when a modulator or PowderGate component should be replaced. This feature can also be used to monitor tooling and blast head maintenance. All alarm warnings are written to clearly explain the error and the requirements to clear. These messages can be modified in the lathe command file.
- **Program development** – Blast programs for the Advanced Lathe can be created through the onboard computer or on a remote workstation. Once created the blast routines can be stored locally on the lathes hard drive, or our TCE system can communicate with the corporate network accessing blast routines that are stored in a centralized vault. This is the preferred set-up for factories with multiple installations. The system comes configured with both USB and Ethernet connections to facilitate either configuration.

Programming on the lathe is done using a variation of the standard machining language, G-code. This is the same type of control language that is used on CNC machining centers. The TCE converts this code into blast instructions for the lathe using the Galil motion control card.

The software has the ability to integrate routines on each of the different axes, and coordinate these movements with directed blast commands on the AccuFlo. The engineer is able to set all blast variables through the programming UI. The blast program contains data on the precise movement for each axis (acceleration, speed, and position), when the blast turns on and off, and blast pressure. The system also supports the ability to add optional features such as blow-off nozzles, motors, and valves; all controlled through the program architecture.

- **Multiple user interfaces** – The Advanced Lathe has two user interfaces; a basic interface that is used during production by the operator and an engineering interface. The production interface limits the operator to choosing a specific blast program. Once this has been done the lathe directs the operator to install the correct blast head and mandrel tooling. If all three components do not match the operator will not be allowed to start the blast operation.

A password is required to enter the engineering interface. Through this interface, program routines can be developed, alarms can be adjusted, and maintenance can be done on the lathe. During the development of a blast routine this interface allows the engineer to ensure that the nozzles are in the correct positions for blasting and that no interferences have been created.

- **Smart Tooling** – Our new tooling system design allows the system to recognize that the correct blast head and mandrel that have been loaded onto the lathe. Each tool, either blast head or mandrel, has a unique identifier recognizable by the lathe. The program selected by the operator must match the installed tool before the start button becomes active. Each time a piece of tooling is loaded onto the lathe our TCE package runs a verification program to identify the component and match it against the acceptable tooling specified in the program. The operator is alerted if the program and tooling do not match. Error messages are highly visible and clearly worded to assist the operator. Smart tools also contain a zero position that allows for accurate positioning of the part with respect to the spindle and nozzles.

With the initial installation of our Advanced Lathe the smart tooling will provide a mechanism to ensure that the correct program and head are used for a specific device. As the Advanced Lathe is incorporated into other manufacturing processes the benefits of smart tooling will increase. Having a zero position on your device will allow you to carefully trace specific regions of the device with the blast stream.

- **Integration capabilities** – The Advanced Lathe is designed with the expectation that some applications will require integration with external parts handling systems. We use an open architecture to make communication easy. Additionally, optional features can allow the doors to be opened automatically and fixtures to be loaded into the parts handling area. The lathe also has the ability to receive command instructions from an external source. As you needs grow the Advanced Lathe can be configured to meet the entire range of your production requirements.