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# Request for Proposal/Quote "Notice to Proposers" Tooling, Fixtures, and Upgrades - Machining

RFP Number: 2023-12
Date Posted: 5/17/2023
Closing Date: 05/30/2023

Email Address: <a href="mailto:purchasing@wsutech.edu">purchasing@wsutech.edu</a>

Website: <a href="https://wsutech.edu/purchasing/">https://wsutech.edu/purchasing/</a>

Project Name: Tooling, Fixtures, and Upgrades - Machining

Purpose of Purchase: To equip new CNC Mills and lab with Tooling and Fixtures and update existing CNC Mill and Lathe tooling and fixtures and to update the existing machines with latest technologies to align with new curriculum.

**Agency:** WSU Campus of Applied Sciences and Technology (WSU Tech)

4004 North Webb Road, Gateway Bldg., Wichita, KS 67226

**Guarantee:** No Monetary Guarantee Required

Scope Summary: The Scope of this proposal is to include the 25 different tooling/fixture kits in various quantities (Section 1) and the 4 separate machine technology upgrade/maintenance items (Section 2) as listed in the detailed specifications included below.

## **READ THIS REQUEST CAREFULLY**

From this point forward, all Contractors and Vendors shall be referred to as "Contractor". Failure to abide by all the conditions of this Request may result in the rejection of your proposal/quote. Inquiries about this Request should indicate the RFP number and title and be directed to the **Purchasing Team** via email address above.

This notice to Contractors is intended to be used in conjunction with the Request for Proposal and all terms and conditions.

**Solicitation Reference Number:** The above number has been assigned to this Solicitation and <u>MUST</u> be shown on all correspondence or other documents associated with this Solicitation and <u>MUST</u> be referred to in all verbal communications. All inquiries, written or verbal, shall be directed to the **Purchasing Team** via email address above.



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Failure to notify the Purchasing Team of any conflicts or ambiguities in this Solicitation for Proposal may result in items being resolved in the best interest of **WSU Tech**. Any modification to this Request shall be made in writing by addendum and mailed to all bidders who received the original request. Only written communications are binding.

**Sales Tax Determination:** This Project has been determined by the Kansas Department of Revenue to be exempt from Kansas Sales Tax(es). The cost of said tax must be EXCLUDED FROM all Bid and Contract prices. Sales tax includes all applicable state, county, and city sales tax. If needed, **WSU Tech** will provide the Contractor with a tax exemption number for their use.

**Contact:** For technical information regarding the project specified in this solicitation and to arrange for a site visit, contact:

Purchasing Team - purchasing@wsutech.edu

Any correspondence by potential bidders, with WSU Tech, must be documented in writing and submitted to the <u>Purchasing Team</u>, to be considered for any possible addenda, and/or in the evaluation of the proposal/quote. Any change in specification shall be authorized only by the Purchasing Team and will be issued by written addendum.

WSU Tech also reserves the right to waive minor informalities and reserves the right to:

- 1. Reject any and all proposals received in response to this RFP.
- 2. Select a proposal for contract negotiation other than the one with the lowest cost.
- 3. Negotiate any aspect of the proposal with any Vendor.
- 4. Terminate negotiations and select the next most responsive Vendor for contract negotiations.
- 5. Terminate negotiations and prepare and release a new RFP.
- 6. Terminate negotiations and take such action as deemed appropriate.

Any decision to cancel or reject any and all proposals is in WSU Tech's sole discretion. WSU Tech also reserves the right to change the evaluation criteria or any other provision in this RFP by posting notice of the change(s) on the <u>Purchasing</u> section of WSU Tech's webpage. Vendors should check the site daily for updates (e.g. amendments, responses to questions) and are expected to review information on the site carefully before submitting a final proposal. Such changes or updates above constitutes written notice to each Vendor.



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#### Scope of Work/Specifications

Please refer to Section 1 and Section 2 of the list below.

#### **Duration of Offer**

All proposal responses must indicate they are valid for a minimum of one hundred eighty (180) calendar days from the date of the proposal closing unless extended by mutual written agreement of both parties. Prices and terms of the proposal as stated must be valid for the length of the resulting contract.

#### **RFP Terms and Conditions**

This RFP includes and incorporates the Contract Provisions form. Contractors should be aware that these terms and conditions in preparing responses to this RFP. Much of the language reflected in any resulting contract with WSU Tech is required by statute. If you take exception to any of the language in the terms and conditions, you must indicate those exceptions in your response to the RFP; certain exceptions may result in your proposal being disqualified from further review and evaluation. Only those exceptions indicated in your response to the RFP will be available for discussion or negotiation.



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#### **Proposal Form**

| Lump Sum Contract Proposal for: \$ | DATE: |
|------------------------------------|-------|
| Proposer:                          |       |
| ADDRESS:                           |       |

Base Bid: In compliance with the Instructions to Proposers and subject to all conditions thereof, the undersigned hereby proposes to furnish all material and equipment and to perform all labor for and incidental to the entire Work for the Project, all in accordance with the Drawings, Specifications and Contract Documents.

WSU TECH IS TAX EXEMPT BY STATE STATUTE. THE SUCCESSFUL CCONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL STATE AND LOCAL TAXES AND WILL NOT PASS SUCH ONTO WSU TECH.



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# Proposed Timeline of Project

| The ι | undersigned | agrees to | complete al | l Work within | agreed upo | n date o | of written | Notice to | Proceed. |
|-------|-------------|-----------|-------------|---------------|------------|----------|------------|-----------|----------|
|-------|-------------|-----------|-------------|---------------|------------|----------|------------|-----------|----------|

Liquidated damages may be assessed at the rate of \$100 per day if the Contractor exceeds the contracted number of days for completion.

**Proposed Timeline for project completion:** 

| Subcontractors:  |
|--|
| The undersigned proposes to use the following Subcontractors for this Project: |
| Mechanical Work:   |
| Electrical Work:   |
| Other:   |
| References:  |
| 1)   |
| 2)   |
| 3)   |



Closing Date: 05/30/23, 4:00 pm

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#### **SIGNATURE SHEET**

**RFP Number:** 

| By submission of a bid and the signatures affixed thereto, the bidder certifies all products and servi proposed in the bid meet or exceed all requirements of this specification as set forth in the request all exceptions are clearly identified. |  |  |  |
|---|--|--|--|
| State Tax: The undersigned attests this Proposer is not in arrears in taxes due the State of Kansas.  |  |  |  |
| Legal Name of Firm or Corporation   |  |  |  |
|   |  |  |  |

**Items required with your Proposal/Quote**: The items below, that are checked, must be submitted with your proposal for your offer to be considered responsive to the Request for Proposal.

- Proposal Form
- Proposed Timeline, Subcontractors, & References

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- Signature Sheet
- Certification Immigration & Reform
- Disable Vet, Minority/Women Owned
- Contractual Provisions
- Current W-9



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# CERTIFICATION REGARDING IMMIGRATION REFORM & CONTROL

All Contractors are expected to comply with the Immigration and Reform Control Act of 1986 (IRCA), as may be amended from time to time. This Act, with certain limitations, requires the verification of the employment status of all individuals who were hired on or after November 6, 1986, by the Contractor as well as any subcontractor or sub-subcontractor. The usual method of verification is through the Employment Verification (I-9) Form. With the submission of this bid, the Contractor hereby certifies without exception that Contractor has complied with all federal and state laws relating to immigration and reform. Any misrepresentation in this regard or any employment of persons not authorized to work in the United States constitutes a material breach and, at the College's option, may subject the contract to termination and any applicable damages.

Contractor certifies that, should it be awarded a contract by **WSU Tech**, Contractor will comply with all applicable federal and state laws, standards, orders and regulations affecting a person's participation and eligibility in any program or activity undertaken by the Contractor pursuant to this contract. Contractor further certifies that it will remain in compliance throughout the term of the contract.

At **WSU Tech's** request, Contractor is expected to produce to **WSU Tech** any documentation or other such evidence to verify Contractor's compliance with any provision, duty, certification, or the like under the contract.

| Contractor agrees to include this Certification in subcontractors in connection with the services perform | •    |
|---|------|
|   |      |
| Signature, Title of Contractor  | Date |



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# Disabled Veteran, Minority and Woman Owned Business Declaration

Proposer hereby declares that it is a Minority/Woman Owned Business Enterprise by virtue of the following:

| Type            | of Business: Check applicable block(s)   |  |  |  |  |  |
|-----------------|--|--|--|--|--|--|
|                 | "Service Disabled Veteran"   |  |  |  |  |  |
|                 | "Black American" includes persons having origins in any of the Black racial groups of Africa.  |  |  |  |  |  |
|                 | "Woman-Owned Business Enterprise".   |  |  |  |  |  |
|                 | "Hispanic American" includes persons of Mexican, Puerto Rican, Cuban, Central or South<br>American, or other Spanish cultures or origins, regardless of race.  |  |  |  |  |  |
|                 | "Native American" includes American Indians, Eskimos, Alaskan Indians, Aleuts and Native<br>Hawaiians.   |  |  |  |  |  |
|                 | "Asian-Pacific Americans" includes persons whose origins are from Japan, China, Taiwan, Korea, Southeast Asia, the Philippines, Samoa, Guam, the U.S. Trust Territories of the Pacific, and Northern Marianas.   |  |  |  |  |  |
| one p<br>at led | : MBE and WBE are defined by Federal Register 49 CFR, Part 23, as a business firm which as at least fifty-<br>percent (51%) owned by minority or women group members, or in the case of a publicly owned business,<br>ast fifty-one percent (51%) of the stock of which is owned by the minority or woman. The minority or<br>an ownership must exercise actual day to day management and control of the business. |  |  |  |  |  |
| Prop            | oser:  |  |  |  |  |  |
| Certi           | fied by (name of Public Entity, if applicable):  |  |  |  |  |  |
| City:           | County:  |  |  |  |  |  |
| State           | : Zip Code:  |  |  |  |  |  |
| Certi           | ficate Number:   |  |  |  |  |  |
|                 | (Attach copy)  |  |  |  |  |  |
| Signa           | ture: Date:  |  |  |  |  |  |

Minority and Woman Owned Businesses (M/WBE) shall complete this page and return with their submittal.



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#### CONTRACTUAL PROVISION ATTACHMENT

Wichita State University Campus of Applied Sciences & Technology (WSU Tech)
DA-146a (Rev. 02.20)

The parties agree that the following provisions are hereby incorporated into the agreement to which it is attached and made a part thereof:

- 1. <u>Terms Herein Controlling Provisions</u>: It is expressly agreed that the terms of each and every provision in this attachment shall prevail and control over the terms of any other conflicting provision in any other document relating to and a part of the agreement in which this attachment is incorporated. Any terms that conflict or could be interpreted to conflict with this attachment are nullified.
- 2. Kansas Law and Venue: The agreement shall be subject to, governed by, and construed according to the laws of the State of Kansas, and jurisdiction and venue of any suit in connection with the agreement shall reside only in courts located in Sedgwick County, Kansas.
- 3. Termination Due To Lack Of Funding Appropriation: If sufficient funds are not appropriated to continue the function performed in this agreement and for the payment of the charges-hereunder, the University may terminate this agreement at the end of its current fiscal year. The University agrees to give written notice of termination to contractor at least 30 days prior to the end of its current fiscal year, and shall give such notice for a greater period prior to the end of such fiscal year as may be provided in this contract, except that such notice shall not be required prior to 90 days before the end of such fiscal year. Contractor shall have the right, at the end of such fiscal year, to take possession of any equipment provided under any contract for which it has not been paid. The University will pay to the contractor all regular contractual payments incurred through the end of such fiscal year plus contractual charges incidental to the return of any such equipment. Upon termination of the agreement by the University, title to any such equipment shall revert to Contractor at the end of the University's current fiscal year. The termination of the contract pursuant to this paragraph shall not cause any penalty to be charged to the agency or the contractor.
- 4. <u>Disclaimer of Liability</u>: No provision of this contract will be given effect that attempts to require the State of Kansas or the University to defend, hold harmless, or indemnify any contractor or third party for any acts or omissions. The liability of the State of Kansas and the University is defined under the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.).
- 5. Anti-Discrimination Clause: Contractor agrees: (a) to comply with the Kansas Act Against Discrimination (K.S.A. 44-1001 et seq.) and the Kansas Age Discrimination in Employment Act (K.S.A. 44-1111 et seq.) and the applicable provisions of the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) (ADA), and Kansas Executive Order No. 19-02, and to not discriminate against any person because of race, color, gender, sexual orientation, gender identity or expression, religion, national origin, ancestry, age, military or veteran status, disability status, marital or family status, genetic information, or political affiliation that is unrelated to the person's ability to reasonably perform the duties of a particular job or position; (b) to include in all solicitations or advertisements for employees, the phrase "equal opportunity employer"; (c) to comply with the reporting requirements set out at K.S.A. 44-1031 and K.S.A. 44-1116; (d) to include those provisions in every subcontract or purchase order so that they are binding upon such subcontractor or vendor; (e) that a failure to comply with the reporting requirements of (c) above or if the contractor is found guilty of any violation of such acts by the Kansas Human Rights Commission, such violation shall constitute a breach of contract and the agreement may be cancelled, terminated or suspended, in whole or in part, by the contracting state agency or the Kansas Department of Administration; (f) if it is determined that the Contractor has violated applicable provisions of ADA, such violation shall constitute a breach of contract and the agreement may be cancelled, terminated or suspended, in whole or in part, by the University or the Kansas Department of Administration.

#### Contractor agrees to comply with all applicable state and federal anti-discrimination laws.

The provisions of this paragraph number 5 (with the exception of those provisions relating to the ADA) are not applicable to a Contractor who employs fewer than four employees during the term of such contract or whose contracts with the contracting State agency cumulatively total \$5,000 or less during the fiscal year of such agency.

- 6. <u>Acceptance</u>: The agreement shall not be considered accepted, approved or otherwise effective until the statutorily required approvals and certifications have been given, including, but not limited to the signature of an authorized representative of the University, as defined in University policy.
- 7. Arbitration. Damages and Warranties: Notwithstanding any language to the contrary, no interpretation of this contract shall find that the State or the University have agreed to binding arbitration, or the payment of damages or penalties. Further, the University does not agree to pay attorney fees, costs, or late payment charges beyond those available under the Kansas Prompt Payment Act (K.S.A. 75-6403), and no provision will be given effect that attempts to exclude, modify, disclaim or otherwise attempt to limit any damages available to the University at law, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.
- 8. Representative's Authority To Contract: By signing this contract, the representative of Contractor thereby represents that such person is duly authorized by Contractor to execute this contract on behalf of Contractor and that Contractor agrees to be bound by the provisions thereof.



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- 9. Responsibility for Taxes: The State of Kansas and the University shall not be responsible for, nor indemnify a Contractor for, any federal, state or local taxes which may be imposed or levied upon the subject matter of this contract.
- 10. <u>Insurance</u>: The University/College shall not be required to purchase any insurance against loss or damage to property or any other subject matter relating to this contract, nor shall this contract require it to establish a "self-insurance" fund to protect against any such loss or damage. Subject to the provisions of the Kansas Tort Claims Act (K.S.A. 75-6101 et seq.), Contractor shall bear the risk of any loss or damage to any property in which Contractor holds title.
- 11. <u>Information</u>: No provision of this contract shall be construed as limiting the State of Kansas Legislative Division of Post Audit from having access to information pursuant to K.S.A. 46-1101 et seq.
- 12. <u>Confidentiality</u>. As a state agency, the University's contracts are generally public records. Accordingly, no provision of this contract shall restrict the University's ability to produce this contract and/or any corresponding documents in response to a lawful request or from otherwise complying with the Kansas Open Records Act (K.S.A. 45-215 et seq.)
- 13. <u>The Eleventh Amendment</u>: The Eleventh Amendment is an inherent and incumbent protection with the State of Kansas and need not be reserved, but prudence requires the State and the University to reiterate that nothing related to this contract shall be deemed a waiver of the Eleventh Amendment.
- 14. <u>Campaign Contributions / Lobbying</u>: Funds provided through a grant award or contract shall not be given or received in exchange for the making of a campaign contribution. No part of the funds provided through this contract shall be used to influence or attempt to influence an officer or employee of the University or any State of Kansas agency or a member of the Legislature regarding any pending legislation or the awarding, extension, continuation, renewal, amendment or modification of any government contract, grant, loan, or cooperative agreement.
- 15. Privacy of Student Records. Contractor understands that the University is subject to the Family Educational Rights and Privacy Act (20 U.S.C. § 1232g) (FERPA) and agrees to handle any student education records it receives pursuant to the contract in a manner that enables the University to be compliant with FERPA and its regulations. Contractor agrees to protect the privacy of student data and educational records in a commercially reasonable manner and shall not transmit, share, or disclose any data about a student without the student's written consent, except to other University officials who seek the information within the context of his/her professionally assigned responsibilities and used within the context of official University business. Contractor shall promptly report to the University any request for or improper disclosure of University's student educational records.
- 16. Export Control. Contractor agree to comply with all U.S. Laws relating to the transfer, export, or re-export of technology and technical data, as defined in the export controls under the International Traffic in Arms Regulations (ITAR) 22 Code of Federal Regulations Parts 120-130 or the Export Administration Regulations (EAR) 15 Code of Federal Regulations Parts 730-774. The release of information to any employee or other person, who is not a U.S. Citizen or permanent resident, as well as to corporations or to any other entity, organization, or group that is not incorporated or otherwise organized to do business in the United States may require advanced written authorization from the appropriate U.S. agency. Contractor shall notify University in writing prior to disclosure of any technical data or other items subject to EAR or ITAR and identify the export controlled items at issue and the applicable categories and subcategories of the United States Munitions List and/or Export Control Classification Number(s). University reserves the right to decline to accept any items or information controlled under ITAR or EAR.
- 17. <u>Certification</u>. Contractor certifies that to the best of its knowledge neither it nor any of their principals are presently debarred, suspended, proposed for debarment, the subject of an indictment involving the criminal statutes enumerated in 22 Code of Federal Regulations §120.27, or otherwise declared ineligible for the award of contracts by any Federal agency. Contractor shall provide immediate written notice to the University if at any time it learns that this certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
- 18. <u>Facility Access</u>. To the extent Contractor is required to be on the University's premises in the performance of any contract, Contractor and its representatives will adhere to the University's reasonable safety and security policies and procedures, and will use commercially reasonable efforts not to interfere with the University's regular operations. Contractor further agrees to, upon request, include the University as an additional insured on its general liability insurance policy on a primary and non-contributory basis and provide the University with a certificate of insurance.
- 19. <u>Electronic Signature</u>. The parties agree that the contract may be signed with electronic signatures. If an electronic signature is used, the parties agree that it is the legally binding equivalent to the signing party's handwritten signature. Whenever either party executes an electronic signature on the contract, it has the same validity and meaning as a handwritten signature. The parties agree that neither party will, at any time in the future, repudiate the meaning of an electronic signature or claim that an electronic signature is not legally binding.

| Signature | Date |
|-----------|------|

## **Specifications**

# **Section 1 Tooling and Fixtures**

#### Item 1-

#### Quantity 2 all pieces kitted together

Extruded 2.5" (64MM) Spindle Liner Kit (3/8" to 2 1/4" Bore diameters) 14 pieces for round bar stock

.375"X1.75"

.5"X1.75"

.625"X1.75"

.75"X1.75"

.875"X1.75"

1"X1.75"

1.125"X1.75"

1.25"X1.75"

1.375"X1.75"

1.5"X1.75"

1.625"X1.75"

1.75"X2.5"

2"X2.5"

2.25"X2.5"

#### Item 2-

#### Quantity 100

Pull Stud Retention Knobs. Knobs must have a 45° knob angle, 0.590" knob diameter, and 0.393" neck diameter, with a 5/8"-11 thread size. These pull studs have a through-hole for through-tool coolant.

#### Item 3-

#### Quantity 10

12 piece ER32 Tap Collet Set-#6, #8, #10, #12, 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", and 3/4"

#### Item 4-

Quantity 10----CAT 40 Toolholder kits—all items to make one single kit

CAT 40 ER16 Collet Chuck, 2.5" Gage Length-quantity 2

CAT 40 ER 16 Collet Chuck, 4" Gage Length-quantity-1

CAT 40 ER25 Collet Chuck, 2.5" Gage Length-quantity 2

CAT 40 ER 25 Collet Chuck, 4" Gage Length quantity-1

CAT 40 ER32 Collet Chuck, 2.5" Gage Length-quantity 3

CAT 40 ER32 Collet Chuck, 4" Gage Length quantity-1

15 piece ER 25 Straight Bore Collet Set- 1/8" to 5/8"

18 piece ER 32 Straight Bore Collet Set- 1/8" to 25/32"

10 piece ER 16 Straight Bore Collet Set- 1/16" to 3/8"

ER 16 Hex Wrench Quantity 1

ER 25 Hex Wrench Quantity 1

ER 32 Hex Wrench Quantity 1

Pull Stud Retention Knobs. Knobs must have a 45° knob angle, 0.590" knob diameter, and 0.393" neck diameter, with a 5/8"-11 thread size. These pull studs have a through-hole for through-tool coolant. Quantity 10

#### Item 5-

#### Quantity 10

6 pack of CAT 40 ER 32 Collet Chucks

4-2.5" Gage Length

2-4" Gage Length

#### Item 6-

#### Quantity 10

NC Keyless Drill Chuck-3.54' Gage Length CAT 40 with 5/8"-11 retention knob thread size

#### <u>Item 7-</u>

#### Quantity 12

6" Single Station Fixed Jaw Vise 9" Opening; Flange Style.

#### Item 8-

#### Quantity 10

4" Single Station Fixed Jaw Vise 5" Opening; Flange Style.

#### Item 9-

#### Quantity 10

5" Non Machinable Serrated Vise Jaws (pairs) for HAAS 5 inch self-centering Vise

#### Item 10-

#### Quantity 10

5" Aluminum Machinable Vise Jaws (pairs) for HAAS 5 inch self-centering Vise

#### Item 11-

#### Quantity 12

CAT 40 2.5" Projection Collet Chuck ER Taper Shank .039" to .511" capacity. Coolant through the tip.

#### Item 12-

#### Quantity 1

CNC Bar Puller 1" Shank, 1/8" to 3 ½" grip range. Square Shank. Heavy Duty

#### Item 13

#### Quantity 6

2 inch Gridplate to fit HAAS VF2 work area--15"X 15"

#### Item 14 Precision Measuring Tools sets-

#### Quantity 15

Digital OD Micrometer (0-1")

Absolute Digital Calipers (0-6")

Dial Test Indicator 0-15-0 dial reading

Magnetic Base stand with 6" Adjustable rod and Universal Clamp. Accepts Test indicator, dial gauges, can be held by stem or by backing plate; stand must have magnetic on/off switch

#### Item 15

#### Quantity 100

HAPN Carbide Shell Mill Insert, Parallelogram Positive/Negative, Grade HP30

#### Item 16

#### Quantity 4 for each End Mill list-8 different sizes/types--32 total

HEPM 1" Carbide End Mill, 1 Shank x 2" LOC, 0.06" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter HEPM 1" Carbide End Mill, 1 Shank x 2" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter HEPM 3/4" Carbide End Mill, 3/4" Shank x 2" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter HEPM 3/2" Carbide End Mill, 1/2" Shank x 2" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter HEPM 3/2" Carbide End Mill, 1/2" Shank x 1-1/4" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter

HEPM ½" Carbide End Mill,, 3/8" Shank x 1" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter

HEPM ¼" Carbide End Mill,, 1/4" Shank x 1-1/8" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter

HEPM ¼" Carbide End Mill,, 1/4" Shank x 3/4" LOC, 0.03" Radius, 6 Flute, Hybrid AlCrN Coated, Chip Splitter

#### Item 17

#### Quantity 4

60° Indexable Dovetail Cutter, 1.181" Diameter x 3/4" Shank x 4.7244" Overall Length, 3 Inserts

#### Item 18

#### Quantity 50

Carbide Turning Insert, 55° Rhombic, Grade HTK20

#### Item 19

#### Quantity 4

HSPM1, 1/2" 45° Carbide Chamfer Mill, 1/4" LOC x 3" Overall Length, 4 Flute, TiAlN Coated

#### Item 20

#### Quantity 4 for each Thread Mill-16 Total

1/2"-13 UNC Parallel Internal Carbide Thread Mill, 3/8" Shank x 7/8" Thread Length, 4 Flute, TiAIN Coated, TSC

3/8"-16 UNC Parallel Internal Carbide Thread Mill, 5/16" Shank x 3/4" Thread Length, 4 Flute, TiAIN Coated, TSC

5/16"-18 UNC Parallel Internal Carbide Thread Mill, 1/4" Shank x 5/8" Thread Length, 3 Flute, TiAIN Coated, TSC

1/4"-20 UNC Parallel Internal Carbide Thread Mill, 3/16" Shank x 1/2" Thread Length, 3 Flute, TiAlN Coated, TSC

#### Item 21

#### Quantity 4

CAT 40 Shell mill holder has a 3/4" pilot bore and a 2" gage length, TSC

#### Item 22

#### Quantity 30

Insert Screw-Thread diameter and pitch: 4mm x 0.7. Length of thread: 10mm.

#### Item 23

Quantity 4-all items packaged as a kit

CAT 40 Shell Mill Holder 1" Pilot X 2" gage, TSC-Quantity 1

CAT 40 Shell Mill Holder 3/4" Pilot X 2" gage, TSC-Quantity 3

Pull Stud/Retention Knobs 45° knob angle, 0.590" knob diameter, and 0.393" neck diameter, with a 5/8"-11 thread size. These pull studs have a through-hole for through-tool coolant-Quantity 10

HOP Carbide Shell Mill Insert Octagon Positive Grade HP30-Quantity 10

HOP Carbide Shell Mill Insert Octagon Positive Grade HMP20-Quantity 10

HOP Carbide Shell Mill Insert Octagon Positive Grade HN25-Quantity 20

HOP Carbide Shell Mill Insert Octagon Positive Grade HMP35-Quantity 10

HRNP Carbide Shell Mill Insert Rectangle Negative Positive Grade HP30-Quantity 10

HRNP Carbide Shell Mill Insert Rectangle Negative Positive Grade HMP20-Quantity 10

HRNP Carbide Shell Mill Insert Rectangle Negative Positive Grade HN25-Quantity 20

HRNP Carbide Shell Mill Insert Rectangle Negative Positive Grade HMP35-Quantity 10

HS6NP Carbide Shell Mill Insert Trigon Negative Positive Grade HP30-Quantity 10

HS6NP Carbide Shell Mill Insert Trigon Negative Positive Grade HMP20-Quantity 10

HS6NP Carbide Shell Mill Insert Trigon Negative Positive Grade HN25-Quantity 20

HS6NP Carbide Shell Mill Insert Trigon Negative Positive Grade HMP35-Quantity 10

#### Item 24

Quantity 24

Heavy Duty 32 gallon Plastic trash cans 27"x22" with handles. Color: Red

# <u>Item 25</u> <u>Quantity 20 for each End Mill listed-24 sizes/types of End Mills; 480 in total</u>

1" Carbide End Mill, 1" Shank x 2" LOC, 0.06" Radius, 3 Flute, DLC Coated 1" Carbide End Mill, 1" Shank x 2" LOC, 0.03" Radius, 3 Flute, DLC Coated 3/4" Carbide End Mill, 3/4" Shank x 1-5/8" LOC, 0.06" Radius, 3 Flute, DLC Coated 3/4" Carbide End Mill, 3/4" Shank x 1-5/8" LOC, 0.03" Radius, 3 Flute, DLC Coated 1/2" Carbide End Mill, 1/2" Shank x 1-1/4" LOC, 0.06" Radius, 3 Flute, DLC Coated 1/2" Carbide End Mill, 1/2" Shank x 1-1/4" LOC, 0.03" Radius, 3 Flute, DLC Coated 3/8" Carbide End Mill, 3/8" Shank x 1" LOC, 0.03" Radius, 3 Flute, DLC Coated 3/8" Carbide End Mill, 3/8" Shank x 1" LOC, 0.01" Radius, 3 Flute, DLC Coated 1/4" Carbide End Mill, 1/4" Shank x 5/8" LOC, 0.03" Radius, 3 Flute, DLC Coated 1/4" Carbide End Mill, 1/4" Shank x 5/8" LOC, 0.01" Radius, 3 Flute, DLC Coated 1/8" Carbide End Mill, 1/8" Shank x 3/8" LOC, 0.01" Radius, 3 Flute, DLC Coated 1" Carbide End Mill, 1" Shank x 1-1/4" LOC, 0.03" Radius, 3 Flute, Uncoated 3/4" Carbide End Mill, 3/4" Shank x 1-5/8" LOC, 0.03" Radius, 3 Flute, Uncoated 3/4" Carbide End Mill, 3/4" Shank x 1-5/8" LOC, 0.015" Radius, 3 Flute, Uncoated 1/2" Carbide End Mill, 1/2" Shank x 1-1/4" LOC, 0.015" Radius, 3 Flute, Uncoated 1/2" Carbide End Mill, 1/2" Shank x 1-1/4" LOC, 0.03" Radius, 3 Flute, Uncoated 3/8" Carbide End Mill, 3/8" Shank x 1" LOC, 0.015" Radius, 3 Flute, Uncoated 1/4" Carbide End Mill, 1/4" Shank x 5/8" LOC, 0.015" Radius, 3 Flute, Uncoated 1/4" Carbide End Mill, 1/4" Shank x 5/8" LOC, 0.03" Radius, 3 Flute, Uncoated 1/4" Carbide End Mill, 1/4" Shank x 3/4" LOC, Square Profile, 3 Flute, Uncoated 1/2" Carbide End Mill, 1/2" Shank x 1" LOC, Square Profile, 3 Flute, Uncoated 3/4" Carbide End Mill, 3/4" Shank x 1-1/2" LOC, Square Profile, 3 Flute, Uncoated 1/8" Carbide End Mill, 1/8" Shank x 7/16" LOC, Square Profile, 3 Flute, Uncoated 1" Carbide End Mill, 1" Shank x 1-1/2" LOC, Square Profile, 3 Flute, Uncoated

### **Section 2-Equipment Machine upgrade and maintenance**

- 1. Install Wireless Probing System; Renishaw probes and Visual Programming System, macros, spindle orientation, and coordinate rotation and scaling to Six HAAS VF2 Vertical Mills
- 2. Maintenance, Calibration, and Tune-up on the Following, to be done in coordination with machine setting.

6-HAAS VF2

2-HAAS UMC 750

4-HAAS ST-15

1-HAAS ST-20

1-HAAS ST-20Y

3. Installation of VPS-Visual Part Programming System

Four HAAS ST-15 CNC Lathes,

One HAAS ST-20 CNC Lathe,

One-HAAS ST20Y CNC Lathe.

VPS is already on one machine it needs activated.

4. Install Wireless Communication System on any HAAS machine not currently equipped

6-HAAS VF2

2-HAAS UMC 750

4-HAAS ST-15

1-HAAS ST-20

1-HAAS ST-20Y