

CRITICAL TECHNOLOGY ASSESSMENT: Five-Axis Machine Tools



SCOPE OF ASSESSMENT

The U.S. Department of Commerce, Bureau of Industry and Security (BIS), Office of Technology Evaluation, in coordination with the U.S. Department of Defense, Office of the Under Secretary of Defense (Industrial Policy), the National Institute of Standards and Technology (NIST), the International Trade Administration (ITA), and the National Nuclear Security Administration (NNSA), is conducting an industrial base survey of the U.S. 5-Axis machine tool industry. The principal goal of this data collection is to analyze the health, competitiveness, and technical capability of the U.S. 5-axis machine tool industry in terms of economic and industrial performance factors. This data collection also includes an analysis of the effects of foreign competition and export controls on the industry's ability to meet the demands of its U.S. Government and global commercial customers.

RESPONSE TO THIS SURVEY IS REQUIRED BY LAW

A response to this survey is required by law (50 U.S.C. app. Sec. 2155). Failure to respond can result in a maximum fine of \$10,000, imprisonment of up to one year, or both. Information furnished herewith is deemed confidential and will not be published or disclosed except in accordance with Section 705 of the Defense Production Act of 1950, as amended (50 U.S.C App. Sec. 2155). Section 705 prohibits the publication or disclosure of this information unless the President determines that its withholding is contrary to the national defense. Information will not be shared with any non-government entity, other than in aggregate form. The information will be protected pursuant to the appropriate exemptions from disclosure under the Freedom of Information Act (FOIA), should it be the subject of a FOIA request.

Notwithstanding any other provision of law, no person is required to respond to nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number.

BURDEN ESTIMATE AND REQUEST FOR COMMENT

Public reporting burden for this collection of information is estimated to average 12 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information to BIS Information Collection Officer, Room 6883, Bureau of Industry and Security, U.S. Department of Commerce, Washington, D.C. 20230, and to the Office of Management and Budget, Paperwork Reduction Project (OMB Control No. -----), Washington, D.C. 20503.

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Section II WHO MUST RESPOND TO THIS SURVEY

Please select the description that most closely reflects your company.*

[☑ here**](#)

Yes	No
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1.	Producer (e.g., manufacturer or integrator) of finished machine tools with five or more axes capable of 5-axis simultaneous control.	Yes	No
2.	Distributor (e.g., independent distributor, sales representative, or authorized dealer) of finished machine tools with five or more axes capable of 5-axis simultaneous control.	Yes	No
3.	If you selected "Yes" to questions 1 or 2 above, please continue completing this survey.		
4.	If you selected "No" for questions 1-2, please complete "Exemption From Survey" below.		

* If more than one description applies to your company, please indicate such with multiple "Yes" responses.

** There should be a "Yes" or "No" response to questions 1 and 2.

EXEMPTION FROM SURVEY

If your company's operations during the last five years did not involve 5-axis simultaneously controlled machine tool production (e.g., manufacture or integration) or distribution and sales, you may be exempt from completing this U.S. Government survey. Please call one of the BIS contacts listed in "General Instructions" to verify your status. Then, complete steps 5-6 below.

5.	Briefly explain the products and/or services provided by your organization in the space below:
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[Explanation:](#)

6.	Please complete and print out the "Certification" page. Then, return a <u>signed copy</u> of the "Certification" page <u>only after</u> your Empowered Official or Point of Contact has confirmed your company's or organization's exemption by speaking with one of our staff. Please transmit the "Certification" to our offices via U.S. mail, express courier, E-mail, or FAX (202) 482-5361.
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Section III

GENERAL INSTRUCTIONS

Please make sure to follow the below instructions 1-7 in completion of the Bureau of Industry and Security 5-axis machine tool survey.

1. The Bureau of Industry and Security (BIS) will accept Excel versions of this survey that are either downloaded or saved from the BIS Internet link or E-mailed to your company directly by BIS staff. The Excel survey contains macros for BIS data collection purposes and therefore must not be re-formatted. Please do not submit to BIS a Word version or a re-formatted Excel version.
2. For your convenience, a Microsoft Word version of the survey is made available on the BIS Internet link. This version is meant for internal, data collection purposes only. Your company may use the Word survey document for drafting inputs or for other internal recording purposes but please make sure not to cut and paste any data from the Word version into the Excel version.
3. Please indicate "Not Applicable" or "NA" in the Excel drop-downs if a particular Section question does not apply to your company. Many Sections also ask for narrative, short answer responses in addition to "Yes," "No," percents, dollars, measurement or unit numbers, etc. These questions should be answered, unless not applicable to your company.
4. Please make sure to read the corresponding **Section Titles** before making inputs. Located at the top of each Section, the Titles indicate which type of company should respond to a particular Section. For example, a Section Title indicating **Producers** should not be completed by Distributors of 5-axis machine tools.
5. Upon completion, review, and certification of the Excel survey document, please transmit the Excel survey by E-mail to the secure, U.S. Federal Government E-mail addresses of Jason Bolton, Trade and Industry Analyst, at jbolton@bis.doc.gov, Chris Nelson, Trade and Industry Analyst, at cnelson@bis.doc.gov, and Ashley Miller, Trade and Industry Analyst, at amiller@bis.doc.gov.
6. For additional questions pertaining to the survey, please contact Jason Bolton, Trade and Industry Analyst, at jbolton@bis.doc.gov or 202.482.5936, or Brad Botwin, Director, Industrial Studies, at bbotwin@bis.doc.gov or 202.482.4060.
7. For letter correspondence to the Office of Technology Evaluation [**but not for survey submissions**], please write to:
Brad Botwin, Director, Industrial Studies
Room 1093, 1401 Constitution Avenue, NW, Washington, DC 20230

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Section IV U.S. Five-Axis Machine Tool Industrial Base Survey

Table of Contents

Section #	Section Name	Page #
I	Scope of Assessment	1
II	Who Must Respond to this Survey [All Survey Participants]	2
III	General Instructions	3
IV	Table of Contents	4
1	Definitions [Linked in Purple in Survey]	5
2	Company Information [Producers and Distributors]	6
3	Company Ownership Information [Producers and Distributors]	7
4	Machine Tool U.S. and Non-U.S. Relationships [Producers and Distributors]	8
5	Machine Tool Domestic/U.S. and Foreign/Non-U.S. Mergers and Acquisitions [Producers Only]	9
6	Supply-Chain Relationships [Producers Only]	10-11
7	Machine Tool Products <small>(Only Tools with Five or More Axes Capable of 5-Axis Simultaneous Control)</small> [Producers and Distributors]	12
8	Production and Distribution [Producers and Distributors]	13
9	Sales Data – Customer Segment Break-Out [Producers and Distributors]	14-15
10	Machine Tool Customers [Producers and Distributors]	16
11	Machine Tool Competition [Producers and Distributors]	17-19
12	Export Controls [Producers and Distributors]	20-21
13	Research and Development (R&D) [Producers Only]	22-23
14	Financial Performance [Producers and Distributors]	24
15	Employment [Producers and Distributors]	25-26
16	Survey Certification [All Survey Participants]	27

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Section 1 U.S. Five-Axis Machine Tool Industrial Base Survey

Definitions

Term	
Applied Research	R&D research expenditure category dedicated to the application of findings from basic research toward discovering new scientific knowledge that has specific commercial objectives with respect to new product, services, processes, or methods. [National Science Foundation]
Authorizing Official	Executive officer of the company or business unit or other individual who has the authority to execute this survey on behalf of the firm.
Basic Research	R&D research expenditure category dedicated to the pursuit of new scientific knowledge or understanding that does not have specific immediate commercial objectives with respect to new products, services, processes, or methods. [National Science Foundation]
Build Time	Measurement of production process reflecting the time [measured in weeks] from initiation of machine tool production process, not including design, to completion of production. This measure does not include time dedicated to proposals or delivery of machine tool.
Controlled Country	A country subject to a license requirement for the export of a 5-axis machine tool under ECCN 2B001. Generally speaking, a controlled country includes all countries except those in both country group A:1, including cooperating countries, and A:4 of Supplement No. 1 to Part 740 of the EAR. <u>Examples</u> of controlled countries include Brazil, China, India, Russia, and Taiwan.
Distributor	<u>Independent distributors</u> , <u>sales representatives</u> , <u>authorized dealers</u> , and producer distribution business units marketing <u>finished</u> metalworking machine tools with five or more axes capable of 5-axis <u>simultaneous control</u> , including mills, grinders, mill/turns, and machining center machine tool products.
Export Administration Regulations (EAR)	The EAR control the export, re-export and activities of dual-use items. The EAR are administered by the U.S. Department of Commerce, Bureau of Industry and Security. The Export Commodity Classification Number (ECCN) for 5-axis simultaneous controlled machine tools is 2B001.
Firm or Company	Entity that owns, controls, or otherwise is affiliated with one or more U.S. entities that, directly or indirectly, manufactures, integrates, produces, distributes, or provides services in the U.S. machine tool industry/marketplace. Entities may be an individual proprietorship, partnership, joint venture, business trust, laboratory, co-operative, or a company subject to U.S. Bankruptcy Court or other corporation regulations, including subsidiary entities in which U.S. entity owns more than 50 percent of the outstanding economic or voting interest.
Five-Axis Machine Tool	For purposes of this survey, a 5-axis machine tool refers to any finished machine tool product with five or more axes capable of at least 5-axis simultaneous control through operation of a computer numerically controlled (CNC) device. The Export Commodity Classification Number (ECCN) for 5-axis simultaneous controlled machine tools is 2B001.
Non-U.S.	Foreign country where machine tool production, purchase, or company incorporation is located.
Process/Product Development	R&D development expenditure category dedicated to the systematic use of the knowledge or understanding gained from research or practical experience directed toward the production or significant improvement of useful products, services, processes, or methods, including the design and development of prototypes, materials, devices, and systems. [National Science Foundation]
Producer	<u>Manufacturers</u> or <u>integrators</u> of <u>finished</u> metalworking machine tools with five or more axes capable of at least 5-axis simultaneous control, including mills, grinders, mill/turns, and machining centers.
Short Supply	Refers to the limited or scarce availability of parts, components, materials, or services in the machine tool supply-chain.
Sole Source	For the supply of parts, components, materials, or services, a "sole source" relationship implies that no alternate domestic or foreign suppliers are available in the machine tool supply-chain other than the current supplier.
United States	The "United States" or "U.S." includes the 50 states, Puerto Rico, the District of Columbia, the island of Guam, the Trust Territories, and the U.S. Virgin Islands.

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Section 2 Company Information

2.a Location Information

U.S. Executive Office Location Only Please – U.S. Located Producers Only

Name of Company	Street Address	City	State	Zip Code
Name of Company	Street Address	City	State	Zip Code
Name of Company	Street Address	City	State	Zip Code
Internet Home Page	Phone Number		FAX Number	
http://	Number		FAX	

U.S. Executive Office Location Only Please – U.S. Located Distributors Only

Name of Company	Street Address	City	State	Zip Code
Name of Company	Street Address	City	State	Zip Code
Name of Company	Street Address	City	State	Zip Code
Internet Home Page	Phone Number		FAX Number	
http://	Number		FAX	

D&B Universal Numbering System (DUNS) Number*	Number	NAICS (4-Digit) Code(s)**	Number	* Find your DUNS number at http://smallbusiness.dnb.com ** Primary number(s) to identify the type of product(s) or service(s) provided at your company. Find NAICS code listings at the following U.S. Government website: http://www.census.gov/epcd/www/naics.html
	Number		Number	
	Number		Number	
CAGE Code	Number		Number	
	Number		Number	
	Number		Number	

2.b Primary Point(s) of Contact and/or Empowered Official(s) Regarding this Survey's Completion

Name(s)	Phone	Location	E-mail Address
Name	Phone	Location	E-mail
Name	Phone	Location	E-mail

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Section 3 Company Ownership Information—U.S. Located Producers and Distributors

3.a Company Ownership if NA here

My company is headquartered in:	Country	<input checked="" type="checkbox"/>
I am the <u>parent company</u> :	Yes/No	<input checked="" type="checkbox"/>
I am a <u>U.S. subsidiary</u> of a <u>non-U.S. parent company</u> :	Yes/No	<input checked="" type="checkbox"/>
I am a <u>wholly owned distributor</u> of a U.S. or non-U.S. machine tool producer:	U.S./non-U.S.	<input checked="" type="checkbox"/>
I am an <u>independent distributor</u> of U.S. and/or non-U.S. produced machine tools:	Yes/No	<input checked="" type="checkbox"/>

Parent Company Name	Address	City	State	Country
Name	Address	City	State	Country

My company is Public/Private	Public/Private/NA	Enclosed drop-down Public/Private/NA
My parent company is Public/Private	Public/Private/NA	Enclosed drop-down Public/Private/NA

3.b Company Ownership Stakes

Please identify the entities and/or individuals holding **5 percent or more** of your company's or organization's voting rights. List no more than FIVE, if applicable, and place them in descending order, the highest % stake listed first. If this question does not pertain to the structure of your company, check the "Not Applicable" (NA) box and continue to Section 16. here

Entity or Individual's Name	Stake	Address	City	State	Country	Enclosed drop-down
1. Name	%	Address	City	State	Country	
2. Name	%	Address	City	State	Country	
3. Name	%	Address	City	State	Country	
4. Name	%	Address	City	State	Country	
5. Name	%	Address	City	State	Country	

From 2003-2008 has one or more foreign governments invested, directly or indirectly, in your company—and **control 5 percent or more** of stockholder voting shares. here

If you answered "Yes," please explain the type of investment and identify the foreign government(s).		Yes	No
Type of Investment	Foreign Governments	Yes	No

From 2003-2008, in addition to those investors mentioned above, have any controlled country entities invested, directly or indirectly, in your company [e.g., entities headquartered in Brazil, China, India, Russia, or Taiwan]? Yes No

If you answered "Yes," please explain the type of investment and identify the foreign entities.		Yes	No
Type of Investment	Entities		

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Section 4

Machine Tool Relationships—U.S. Located Producers and Distributors

4.a Company Relationships

[here if not applicable](#)

Instructions: Please identify and describe your company's **FIVE** most significant U.S., non-U.S., and **controlled country** contractual relationships involving the production, distribution, and/or marketing of 5-axis machine tools. **First**, provide the name, location, and **current** (C) or **planned** (P) status of the relationship; and **second**, provide a description of the relationship by placing a "Yes," "No," %, or "Not Applicable" next to the corresponding company relationship criteria and also provide the **main objective** in formulating the relationship.

Important Note 1: Relationships in this question are **not** intended to include Supplier, Customer, or R&D relationships identified in Sections 6, 10, and 13, respectively.

Important Note 2: Relationships in the **controlled country** list should not duplicate the non-U.S. relationships.

Important Note 3: Please make use of "Other" if there are additional relationship descriptions/categories your company finds applicable.

	Name of Company in Relationship	City/ Province	State or Country	Status		The Relationship is a Joint Venture		My Company's % Stake in this Joint Venture?		Machine Tool- Technology IPR or Patent Licensing is Involved?		This is a Co-Production Relationship		This Relationship is a Product or Service Relationship		Other: [Please Describe Here]		Other: [Please Describe Here]		The Main Objective of this Relationship is:
				Current or Planned?		Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	
Domestic, U.S. Relationships Only																				
A.	Name	City	State	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
B.	Name	City	State	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
C.	Name	City	State	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
D.	Name	City	State	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
E.	Name	City	State	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
Foreign, Non-U.S. Relationships Only																				
A.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
B.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
C.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
D.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
E.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
Controlled Country Relationships Only																				
A.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
B.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
C.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
D.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
E.	Name	City/Province	Country	C	P	Y	N	%	NA	Y	N	Y	N	Y	N	Y	N	Y	N	Text
F.	Have these relationships been affected by U.S. <u>export control</u> regulations?															Yes	No	NA		
																Yes	No	NA		
G.	If "Yes" to the above, please explain.															Description				

Section 4.a Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 5 Mergers and Acquisitions—U.S. Located Machine Tool Producers Only

5.a Domestic Machine Tool-Related Mergers and Acquisitions [here If not applicable](#)

Instructions: Please identify your company's **FIVE most significant U.S.** machine tool-related mergers and acquisitions in the 2003-2008 period. First, record the merged/acquired company's name and location; second, the year the deal closed; and third, the primary objective of the deal.

	Name of Organization	City	State	Year	Primary Objective of Deal
A.	Name	City	State	Year	Primary Objective
B.	Name	City	State	Year	Primary Objective
C.	Name	City	State	Year	Primary Objective
D.	Name	City	State	Year	Primary Objective
E.	Name	City	State	Year	Primary Objective

5.b Foreign Machine Tool-Related Mergers and Acquisitions [here If not applicable](#)

Instructions: Please identify your company's **FIVE most significant non-U.S.** machine tool-related mergers and acquisitions in the 2003-2008 period. First, record the merged/acquired company's name and location; second, the year the deal closed; and third, the primary objective of the deal.

	Name of Organization	City/Province	Country	Year	Primary Objective of Deal
A.	Name	City/Province	Country	Year	Primary Objective
B.	Name	City/Province	Country	Year	Primary Objective
C.	Name	City/Province	Country	Year	Primary Objective
D.	Name	City/Province	Country	Year	Primary Objective
E.	Name	City/Province	Country	Year	Primary Objective

5.c Controlled Country Machine Tool-Related Mergers and Acquisitions [here If not applicable](#)

Instructions: Please identify your company's **FIVE most significant controlled country** machine tool-related mergers and acquisitions in the 2003-2008 period. First, record the merged/acquired company's name and location; second, the year the deal closed; and third, the primary objective of the deal.

Important Note: Relationships in the controlled country list should not duplicate the non-U.S. relationships.

	Name of Organization	City/Province	Country	Year	Primary Objective of Deal
A.	Name	City/Province	Country	Year	Primary Objective
B.	Name	City/Province	Country	Year	Primary Objective
C.	Name	City/Province	Country	Year	Primary Objective
D.	Name	City/Province	Country	Year	Primary Objective
E.	Name	City/Province	Country	Year	Primary Objective

F.	Have U.S. export control regulations influenced your company's mergers and acquisitions (M&A) activities in 2003-2008.	Yes	No	NA
		Yes	No	NA
G.	If "Yes" to the above, provide detailed <u>examples</u> of (1) how U.S. export controls have affected M&A investments in your machine tool business in 2003-2008; and (2) their projected influence in 2009-2012.	Examples: 2003-2008	Examples: 2009-2012	

Section 5 Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 6 Supply-Chain Relationships—U.S. Located Machine Tool Producers Only

6.a Five-Axis Machine Tool-Related U.S. and Non-U.S. Supplier Relationships *Room for Ten U.S. and Ten Non-U.S. Suppliers in Excel Version*

Instructions: Please identify your company’s current **TEN** most significant U.S. and non-U.S. 5-axis machine tool-related supplier relationships. First, provide the names and locations of the companies or internal supplier facilities; and second, provide a description of all the corresponding parts, components, materials, services, etc. supplied to your company.*

Name and Location of U.S. Located Supplier				Part/Component/Material/Service Description**		
Supplier Name		Supplier Location		Description	Sole Source?	
1.	Name	City	State	Description	Yes	No
2.	Name	City	State	Description	Yes	No
3.	Name	City	State	Description	Yes	No
4.	Name	City	State	Description	Yes	No
5.	Name	City	State	Description	Yes	No

Name and Location of Non-U.S. Located Supplier				Part/Component/Material/Service Description**		
Supplier Name		Supplier Location		Description	Sole Source?	
1.	Name	City/Province	Country	Description	Yes	No
2.	Name	City/Province	Country	Description	Yes	No
3.	Name	City/Province	Country	Description	Yes	No
4.	Name	City/Province	Country	Description	Yes	No
5.	Name	City/Province	Country	Description	Yes	No

* There should be at least FIVE suppliers indicated in your survey response, irrespective of external or internal supplier classification.

** Please record all parts/materials/services for each supplier, if applicable.

6.b Five-Axis Machine Tool-Related Short Supply

A.	For the 5-axis machine tools your company produced from 2005-2008, have you identified parts, components, materials, or services in <u>short supply</u> ?	Yes	No	NA
		Yes	No	NA
B.	Please provide any <u>additional</u> <u>details</u> of your company’s short supply problems as related to 5-axis machine tool production or distribution.	Problems		

6.c Five-Axis Machine Tool-Related Foreign Sourcing

		<input checked="" type="checkbox"/> here →	Yes	No	NA
A.	Does your company purchase “non-U.S made” machine tools for the manufacture of <u>5-axis machine tools</u> ?		Yes	No	NA
B.i	Please provide (1) a detailed list of the <u>major</u> “non-U.S. made” tools your company has purchased for the manufacture/integration of 5-axis machine tools; and (2) indicate the corresponding “non-U.S.” original equipment manufacturers (OEMs).				
B.ii	Tool Types	Original Equipment Manufacturers/Tool Make			
C.	Please provide a “U.S. made” to “non-U.S. made” percentage break-out of <u>all</u> production equipment/tooling your company normally uses for <u>5-axis machine tool</u> manufacture/integration.	U.S. Made %	Non-U.S. Made %	NA	

Section 6.a-6.c Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 6 Supply-Chain Relationships *continued*—U.S. Located Machine Tool Producers Only

6.d Five-Axis Machine Tool-Related U.S. and Non-U.S. Sole Source Relationships

Instructions: Please identify your company’s U.S. and non-U.S. sole source 5-axis machine tool-related supplier relationships. First, provide the names and locations of the companies; and second, provide a description of all the corresponding parts, components, materials, services, etc. supplied to your company.

Important Note: These sole source relationships should not replicate those relationships included in Section 6.c.

Name and Location of U.S. Located Supplier				Part/Component/Material/Service Description*
Supplier Name	Supplier Location			Description
1.	Name	City	State	Description
2.	Name	City	State	Description
3.	Name	City	State	Description
4.	Name	City	State	Description
5.	Name	City	State	Description

Name and Location of Non-U.S. Located Supplier				Part/Component/Material/Service Description**
Supplier Name	Supplier Location			Description
1.	Name	Description	Country	Description
2.	Name	Description	Country	Description
3.	Name	Description	Country	Description
4.	Name	Description	Country	Description
5.	Name	Description	Country	Description

* Please record all parts/materials/services for each supplier, if applicable.

6.e Foreign Only Sourcing

A.	For the 5-axis machine tools your company produced from 2005-2008, have you identified parts, components, materials, or services with <u>no</u> U.S. supplier?	Yes	No	NA
		Yes	No	NA
B.	If “Yes” to the above, <u>list</u> all related parts, components, materials, or services with <u>no</u> U.S. supplier.	Foreign <u>Only</u> Supply List		

6.f U.S. Only Sourcing

A.	For the 5-axis machine tools your company produced from 2005-2008, have you identified parts, components, materials, or services with <u>no</u> foreign, non-U.S. supplier?	Yes	No	NA
		Yes	No	NA
B.	If “Yes” to the above, <u>list</u> all related parts, components, materials, or services with <u>no</u> foreign, non-U.S. supplier.	U.S. <u>Only</u> Supply List		

Section 6.d-6.f Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 7

Five-Axis Machine Tool Products—U.S Located Producers and Distributors

7. Technical Specifications for Produced, Distributed, and/or Imported Five-Axis Machine Tool Types

Instructions: Please first, identify all of the finished 5-axis machine tool models your company produces and/or imports for distribution here in the United States; and second, provide the detailed criteria of each 5-axis machine tool as corresponding to the technical and qualitative measures.

Make sure to include only 5-axis machine tools, including mills, grinders, mill/turns, and machining center types.

Machine Tool Criteria		Room for 20 Tools in Excel version			
		1	2	3	4
1.	Machine Tool Type	Type	Type	Type	Type
2.	Machine Tool Model Number	Model #	Model #	Model #	Model #
3.	CNC Controller Make – indicate all if more than 1 CNC make is an option	Make(s)	Make(s)	Make(s)	Make(s)
4.	CNC Controller Model Number – indicate all if more than 1 make is an option	Model #(s)	Model #(s)	Model #(s)	Model #(s)
5.	Does the CNC Have a Network/On-Line Diagnostic Connection?*	Yes No	Yes No	Yes No	Yes No
6.	Spindle Make	Make	Make	Make	Make
7.	Rotary Table Make	Make	Make	Make	Make
8.	Total Number of Axes	# Axes	# Axes	# Axes	# Axes
9.	Maximum Number of Axes Controlled Simultaneously	# Axes	# Axes	# Axes	# Axes
10.	Bi-Directional Position Accuracy for Each Linear Axis, in microns	X Y Z	X Y Z	X Y Z	X Y Z
11.	Bi-Directional Repeatability of Each Linear Axis, in microns	X Y Z	X Y Z	X Y Z	X Y Z
12.	Standard(s) of Manufacture (Specify Standard Used and Year)**	Name Year	Name Year	Name Year	Name Year
13.	Machine Travel for Linear Axis X	#	#	#	#
14.	Machine Travel for Linear Axis Y	#	#	#	#
15.	Machine Travel for Linear Axis Z [Allow for UVW Axes]	#	#	#	#
16.	Machine Travel for Axis A (in degrees)	#	#	#	#
17.	Table or Head Location for Axis A	T H	T H	T H	T H
18.	Machine Travel for Axis B (in degrees)	#	#	#	#
19.	Table or Head Location for Axis B	T H	T H	T H	T H
20.	Machine Travel for Axis C (in degrees)	#	#	#	#
21.	Table or Head Location for Axis C	T H	T H	T H	T H
22.	Major Component Materials of Construction***	Components	Components	Components	Components
23.	Spindle Speed, Range in RPM and Horsepower [record number in HP, not kilowatts]	Range HP	Range HP	Range HP	Range HP
24.	Rotary Axes are Compound Spindle/Heads; Tables; Trunion Style; Rotary on Rotary; or Combination of Spindle/Head and Table?	Type	Type	Type	Type
25.	Number in Current Inventory, if any	#	#	#	#
26.	Harmonized Tariff Schedule (HTS) Number	#	#	#	#
27.	Machine Tool Production Build Time(s) – measured in weeks	Weeks	Weeks	Weeks	Weeks
28.	Built to Order or Standard Product?	B.O. S.P.	B.O. S.P.	B.O. S.P.	B.O. S.P.
29.	U.S. or Non-U.S. Machine Tool Design? If Non-U.S., please indicate country of design.	U.S. Non C	U.S. Non C	U.S. Non C	U.S. Non C
30.	U.S. and Non-U.S. Content Percentage of Machine Tool	U.S. % Non %	U.S. % Non %	U.S. % Non %	U.S. % Non %

* If "Yes" to criterion 5, please indicate in the comment box the frequency of CNC Network/On-Line data transfer/diagnostics between installation location and the producer/OEM, including responses to: How frequent is the Network/On-Line diagnostic connection maintained between the CNC and OEM? What is the type of data exchanged with the customer? Is the data transfer/diagnostic monitored, and if so, how?
 ** This includes ISO, NMTBA [ANSI B5.54], VDI, JIS, and other standards. Please specify the year of the standard used.
 *** Materials listed should include the composites and/or metals used in manufacture of the tool's base castings and other major components.

31. From the list above, in your company's opinion, what performance parameter is the best for determining the quality of a 5-axis machine tool? Criteria #

Section 7 Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 8

Production and Distribution—U.S Located Producers and Distributors

8.a Machine Tool Operations

Instructions: Please provide percentage, numerical, “Yes,” “No,” “Not Applicable” and narrative responses to the following questions on 5-axis machine tool production and distribution; and make sure to qualify your company’s responses, if necessary, in the designated comment box.

Capacity and Imports		%	NA
A.	Based on 2008 unit production levels, what percentage of your company’s U.S.-located production capacity is dedicated to 5-axis machine tools, including mills, grinders, mill/turns, and machine centers?	%	NA
B.	Based on 2008 finished machine tool import levels, what percentage of your company’s import volume is dedicated to imports of 5-axis machine tools, including mills, grinders, mill/turns, and machine centers?	%	NA

Customer Payment Plans

		Yes	No	NA
C.	Does your company provide its customers distinct down-payment and/or milestone payment plans?	Yes	No	NA
D.	Please describe below your company’s down-payment and/or milestone payment plans for the following customer segments.			
E.	Domestic/U.S. Commercial Customers	DP %	Domestic/U.S. Government Customer	DP %
	Narrative	DP %	Narrative	DP %
	Foreign, Non-U.S. Commercial Customers	DP %	Foreign, Non-U.S. Government Customers	DP %
	Narrative	DP %	Narrative	DP %

Tool Features

		Measures	NA
F.	Please identify the enhanced features of the 5-axis machine tools your company plans to introduce for 2008-2012, including add-ons, precision accuracy, CNC features, etc.	Features	NA
G.	Has you company dedicated resources to the research and development (R&D) or acquisition of a proprietary computer numerically controlled (CNC) device?	Yes	No
H.	If “Yes” to the above, please describe the distinct features of your CNC as compared to the industry standard.	Objectives	Features

Machine Tool Testing

		Measures	NA
I.	Does your company test each 5-axis machine tool before final shipment or upon delivery to the customer?	Before	Delivery
J.	If you responded “Before” or “Both” above, please specify the standard [e.g., ISO 23-, ANSI B5.54, etc.] used to validate the accuracy of the machine tool.	Both	Standard

Section 8 Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 9

Machine Tool Sales Data—U.S. Located Producers and Distributors

9.a Machine Tool Sales

Instructions: Please provide your company's domestic/U.S. and export/non-U.S. sales information as corresponding to the classifications on the left side of the table. Make sure to record the corresponding sales **dollar** and **unit number** (volume) information, if requested.

Important Note: Totals in sub-section C should equal combined totals of sub-sections B.i, B.ii, and B.iii. [If not, please qualify the discrepancy in the comment box.]

<p align="center">“U.S.” means U.S., domestic sales; Export means sales from U.S. located producer and distributor facilities to non-U.S. destinations</p>		<p align="center"><i>Record Sales in \$ Thousands, e.g., inputs of \$12 = \$12,000.00</i> <i>Record Units in Single Digits, e.g., input of 5 = 5 Total 5-Axis Machine Tool Units</i></p>																			
		2005				2006				2007				2008*				2009*			
		U.S.		Export		U.S.		Export		U.S.		Export		U.S.		Export		U.S.		Export	
A.	Total Overall Machine Tool Sales [not to include after-market parts/components/services]	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#

Commercial Machine Tool Unit Sales

B.i.	Total Finished 5-Axis Machine Tool Unit Sales [not to include after-market parts/components/services]	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#
------	--	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---

Public Sector/Government Machine Tool Unit Sales

B.ii.	Total Finished 5-Axis Machine Tool Unit Sales [not to include after-market parts/components/services]	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#
-------	--	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---

Non-Profit/University/Research Laboratory Machine Tool Unit Sales

B.iii.	Total Finished 5-Axis Machine Tool Unit Sales [not to include after-market parts/components/services]	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#
--------	--	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---

TOTAL Five-Axis Machine Tool Sales = B.i + B.ii + B.iii

C.	Total Finished 5-Axis Machine Tool Unit Sales [not to include after-market parts/components/services]	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#	\$	#
----	--	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---	----	---

Customer Distribution

D.	From 2005-2008, the <u>percentage</u> of my company's 5-axis machine tool customers that reside in the U.S. is:																					%	
E.	Does your company anticipate the <u>percentage</u> indicated above will change in the 2008-2012 period?																					Yes	No
F.	If “Yes” to the above, by <u>how much</u> will the <u>percentage change</u> ? [indicate with a + or - before the % number]																					+/- %	NA
G.	Please identify the <u>countries</u> where your company plans to market your finished 5-axis machine tools in 2008-2012.																					Countries	NA

Section 9.a Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 9 Machine Tool Sales Data *continued*—U.S. Located Producers and Distributors

9.b Five-Axis Machine Tool Country Sales Break-Out

Instructions: Please provide the country of destination for all your company’s recorded export sales of 5-axis machine tools in the 2005-2008 period [to foreign, non-U.S. locations only]. First, provide a detailed list of all the individual non-U.S. countries receiving finished 5-axis machine tools; and second, provide the corresponding unit volume and machine tool model number information for each year.

Room for 20 Countries in Excel Version

Countries	2005		2006		2007		2008*	
	Unit Volume	Model #s	Unit Volume	Model #	Unit Volume	Model #	Unit Volume	Model #
1. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
2. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
3. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
4. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
5. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
6. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
7. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
8. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
9. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
10. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
11. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
12. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
13. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
14. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s
15. Country	#	Model #s	#	Model #s	#	Model #s	#	Model #s

* Estimates are accepted for 2008.

16.a For the 2005-2008 period, please (1) provide a list of the top five countries where your company has lost 5-axis machine tool business to competitors due to market barriers; (2) record the market barriers associated with each country in the list; and (3) estimate the lost dollar amount for each country.

16.b	Country 1	Country 2	Country 3	Country 4	Country 5
	Country 3 Barriers	Country 3 Barriers	Country 3 Barriers	Country 4 Barriers	Country 5 Barriers
	Lost Sales \$	Lost Sales \$	Lost Sales \$	Lost Sales \$	Lost Sales \$

Section 9.b Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 10

Machine Tool Customers—U.S. Located Producers and Distributors

10. Machine Tool 5-Axis Customers

Instructions: Please provide your company's **FIVE** most significant 5-axis machine tool customers [in **U.S.** installation locations only] for each year in the 2005-2008 period. **First**, provide the individual customer names and 5-axis machine tool installation city and state location(s); and **second**, provide all corresponding 5-axis machine tool model number(s), number of units, and sales dollar criteria.

Important Note: Rank customers **Top-to-Bottom** in order of annual **Total 5-Axis Machine Tool Sales Dollar Value**, e.g., the customer with the most sales is recorded in line 1.

2005

Customer Information

Record Sales in \$ Thousands, e.g., inputs of \$12 = \$12,000.00
Record Units in Single Digits, e.g., inputs of 5 = 5 Total 5-Axis Machine Tool Units

	Customer Name	City	State	Model Number	Number of Units	Total Dollar Sales
1.						
2.						
3.						
4.						
5.						

2006

Customer Information

Record Sales in \$ Thousands, e.g., inputs of \$12 = \$12,000.00
Record Units in Single Digits, e.g., inputs of 5 = 5 Total 5-Axis Machine Tool Units

	Customer Name	City	State	Model Number	Number of Units	Total Dollar Sales
1.						
2.						
3.						
4.						
5.						

2007

Customer Information

Record Sales in \$ Thousands, e.g., inputs of \$12 = \$12,000.00
Record Units in Single Digits, e.g., inputs of 5 = 5 Total 5-Axis Machine Tool Units

	Customer Name	City	State	Model Number	Number of Units	Total Dollar Sales
1.						
2.						
3.						
4.						
5.						

2008*

Customer Information

Record Sales in \$ Thousands, e.g., inputs of \$12 = \$12,000.00
Record Units in Single Digits, e.g., inputs of 5 = 5 Total 5-Axis Machine Tool Units

	Customer Name	City	State	Model Number	Number of Units	Total Dollar Sales
1.						
2.						
3.						
4.						
5.						

* Estimates are accepted for 2008.

Section 10 Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 11

Machine Tool Competition—U.S. Located Producers and Distributors

11.a Machine Tool Competitive Advantage/Disadvantage

Instructions: Please indicate where your company has a competitive advantage and a competitive disadvantage in the 2008 global marketplace for 5-axis machine tools. Place a “Yes,” “No,” or “Nor Applicable” next to the machine tool categories corresponding to the competitive advantages your company and your competitors maintain in the 5-axis machine tool marketplace.

Important Note 1: This applies to 5-axis machine tools only.

Important Note 2: Please make use of “Other” if your company has additional machine tool categories that are the source of your company’s or your competitor’s competitive advantage.

Important Note 3: “NA” mean not applicable to you business or you are not sure.

Drop-down in Excel version to contain “Yes,” “No,” and “NA” responses

Machine Tool Categories		My company has a competitive advantage in these categories			My domestic, U.S. competitors have a competitive advantage in these categories			My foreign, non-U.S. competitors have a competitive advantage in these categories		
		Yes	No	NA	Yes	No	NA	Yes	No	NA
1.	Materials of Construction	Yes	No	NA	Yes	No	NA	Yes	No	NA
2.	Pump/Coolant Devices	Yes	No	NA	Yes	No	NA	Yes	No	NA
3.	Spindle Chillers Make and/or Design	Yes	No	NA	Yes	No	NA	Yes	No	NA
4.	CNC (Controller) Make/Related Services	Yes	No	NA	Yes	No	NA	Yes	No	NA
5.	Maintenance Agreement	Yes	No	NA	Yes	No	NA	Yes	No	NA
6.	Purchase/Deposit Payment Terms	Yes	No	NA	Yes	No	NA	Yes	No	NA
7.	Build-Time/Lead-Time	Yes	No	NA	Yes	No	NA	Yes	No	NA
8.	Training Package	Yes	No	NA	Yes	No	NA	Yes	No	NA
9.	Tool and/or Pallet Kit	Yes	No	NA	Yes	No	NA	Yes	No	NA
10.	Spindle Speed/Durability	Yes	No	NA	Yes	No	NA	Yes	No	NA
11.	Lifespan of Tool	Yes	No	NA	Yes	No	NA	Yes	No	NA
12.	Manufacturer Warranty	Yes	No	NA	Yes	No	NA	Yes	No	NA
13.	Export License Processing Time	Yes	No	NA	Yes	No	NA	Yes	No	NA
14.	Thermal Properties	Yes	No	NA	Yes	No	NA	Yes	No	NA
15.	CNC IS/IT Network/Interface	Yes	No	NA	Yes	No	NA	Yes	No	NA
16.	Tool Weight and/or Footprint	Yes	No	NA	Yes	No	NA	Yes	No	NA
17.	Rotary Table Make	Yes	No	NA	Yes	No	NA	Yes	No	NA
18.	Local Parts Support	Yes	No	NA	Yes	No	NA	Yes	No	NA
19.	Machine Rigidity and/or Durability	Yes	No	NA	Yes	No	NA	Yes	No	NA
20.	Hand Milled Parts	Yes	No	NA	Yes	No	NA	Yes	No	NA
21.	Tool Availability/Inventory Stock	Yes	No	NA	Yes	No	NA	Yes	No	NA
22.	Precision/Repeatability	Yes	No	NA	Yes	No	NA	Yes	No	NA
23.	In-Country Support/Technical Training	Yes	No	NA	Yes	No	NA	Yes	No	NA
24.	Other, please define here	Yes	No	NA	Yes	No	NA	Yes	No	NA
25.	Other, please define here	Yes	No	NA	Yes	No	NA	Yes	No	NA

Section 11.a Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 11 Machine Tool Competition *continued*—U.S. Located Producers and Distributors

11.b Machine Tool Competitiveness

Instructions: Please respond to the following questions regarding your company's competitive position in the machine tool marketplace. Provide "Yes," "No," "Not Applicable," and narrative responses where appropriate.

Competitors

1.a Please (1) identify your company's top five global competitors; and (2) indicate the basis for your competition, e.g., precision, cost, service, materials of construction, etc.

1.b	Name 1-5	State/Province 1-5	Country 1-5	Basis for Competition with Each Competitor (1-5)
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Machine Tool Trade with Controlled Countries

2.a	Is your company aware of 5-axis machine tools being produced by <u>controlled countries</u> [e.g., Brazil, China, India, Russia, Taiwan, etc.]?	Yes	No	NA
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2.b	If "Yes" to the above, please identify the 5-axis machine tool makes, model numbers, and countries of origin.	Makes	Models	Countries
-----	---	-------	--------	-----------

3.a	Have the 5-axis machine tools detailed in "2.b" proven <u>competitive</u> with your company's machine tools?	Yes	No	NA
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3.b	Explain your response to the above, <u>and</u> please specify the known quality parameters, e.g., precision accuracy, repeatability, standards, etc.	Explanation	Parameters
-----	--	-------------	------------

4.a	Do you or your <u>parent company</u> have a sales and/or production presence in a controlled country [e.g., Brazil, China, India, Russia, Taiwan, etc.]?	"S" Yes	"S" No	"S" NA
		"P" Yes	"P" No	"P" NA

4.b	If "Yes" to the above, please specify all the controlled countries where you or your parent has a sales and/or production presence.	"S" Countries	"P" Countries
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5.a	For 5-axis machine tool sales and/or production located in controlled countries, does your company operate independently or in concert with other manufacturers/associations?	Independent	Together	NA
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5.b	If operating with others in controlled country locations, have you teamed up with organizations like the Association for Manufacturing Technology (AMT) to realize market objectives? If "Yes," please provide examples.	Yes	No	NA	Examples
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6.a	Has your company been offered any kind of <u>public sector/government sponsored incentives</u> [like tax abatements] to manufacture 5-axis machine tools in a controlled country [e.g., Brazil, China, India, Russia, Taiwan, etc.]?	Yes	No	NA
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6.b	If "Yes" to the above, please provide <u>examples</u> of such <u>incentives</u> .	Examples		
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6.c	Is your company aware of machine tool competitors being offered <u>public sector/government sponsored incentives</u> to manufacture 5-axis machine tools in a controlled country [e.g., Brazil, China, India, Russia, Taiwan, etc.]?	Yes	No	NA
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6.d	If "Yes" to the above, please provide <u>examples</u> , including a description of the incentives and the counties involved.	Incentives	Countries
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Section 11.b Comments:

Provide "Yes," "No," or "Not Applicable" and narrative responses where appropriate.				
1.a	Do U.S. <u>export controls</u> affect your company's ability to win 5-axis machine tool business in the global marketplace?	Yes	No	NA
1.b	If "Yes" to the above, please describe (1) the impact of U.S. export controls on your competitiveness in non-U.S. markets; and (2) include a list of related countries.	Impact	Countries	NA
2.a	Has your company <u>lost sales</u> of 5-axis machine tools to foreign manufacturers because of U.S. export controls?	Yes	No	NA
2.b	If "Yes" to the above, please estimate: (1) the <u>dollar amount</u> of lost sales in 2004-2008 ; (2) the <u>number</u> of units lost; (3) list the <u>countries</u> that received competitor tools; (4) list all the competitors that <u>won the sale</u> ; and (5) provide license application numbers relating to lost sales, if any.	Lost Sales Dollar Amount		
		Number of Units Lost		
		List of Countries		
		Competitors		
		License Application Numbers		
3.a	In the 2005-2008 period, has your company NOT <u>shipped against licenses already attained</u> from the Bureau of Industry and Security (BIS) for the export of 5-axis machine tools?	Yes	No	NA
3.b	If "Yes" to the above, please <u>explain why</u> ?	Explanation		NA
12.b Machine Tool Export Licensing				
4.a	Has your company had <u>difficulty obtaining visas</u> or <u>export licenses</u> for its employees to provide technical support or machine tool-related services for foreign, non-U.S. buyers?	Yes	No	NA
4.b	If "Yes" to the above, provide <u>detailed examples</u> of related visa or licensing problems your company has faced in the last five years.	Examples		NA
5.a	Does your company have <u>difficulty obtaining licenses or visas</u> for non-U.S. customers that want to come to your U.S. location(s) to evaluate machine tools prior to purchase?	Yes	No	NA
5.b	For the visas in 4.a, please provide the <u>total number</u> of visa applications since 2004 and for each indicate the <u>country</u> , <u>tracking number</u> , <u>ruling</u> , <u>processing time</u> , and <u>reason for denial</u> , if any.	Total #	Track #	Time
		Country	Ruling	Reason
6.a	Does your company offer machine tool features to ensure the <u>non-diversion/end-use</u> of a machine tool, like automatic movement detection devices [AMDDs]?	Yes	No	NA
6.b	If "Yes" to the above, please explain and provide details of such features.	Explanation		NA
7.a	Please indicate your company's <u>average annual total cost for compliance</u> with U.S. export control regulations, including the salary of dedicated staff, outside legal, consulting, training, software, etc.	Cost in \$		NA
7.b	Please provide the <u>average export license application processing time</u> for the sale of your company's 5-axis machine tools to non-U.S. countries. Measured in days.	Time in Days		NA
7.c	Please explain in detail any <u>perceived advantages</u> between controlled country [e.g., Brazil, China, India, Russia, Taiwan, etc.] and non-controlled country export licensing processes involving the sale of 5-axis machine tools.	Discrepancies		NA
		Countries		
Section 12.b-12.c Comment:				

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 12 **Export Controls *continued*—U.S. Located Producers and Distributors**

12.c Company Views on Seeking Future Export Licenses

Instructions: Please respond to the following questions regarding your company's experiences with U.S. export controls. First, provide "Yes," "No," or "Not Applicable" responses; and second, provide narrative explanations where requested.

Export Control Impacts		Yes	No	NA
1.a	Has your company decided <u>not to apply for export licenses</u> for 5-axis machine tools because of past experiences with license denials, license conditions, or extended delays?	Yes	No	NA
1.b	If "Yes" to the above, please provide an <u>explanation</u> in the space provided.	Explanation		
2.a	Has your company <u>changed</u> or <u>considered changing</u> its <u>business model</u> [related to the marketing/production of 5-axis machine tools] in response to export requirements?	Yes	No	NA
2.b	If "Yes" to the above, please provide an <u>explanation</u> in the space provided.	Explanation		
3.a	Has your company considered <u>limiting</u> its business activities related to 5-axis product lines to <u>domestic</u> and or <u>non-controlled</u> country customers <u>only</u> ?	Yes	No	NA
3.b	If "Yes" to the above, please provide an <u>explanation</u> in the space provided.	Explanation		
4.a	Does your company believe that <u>some</u> or <u>all</u> of its products <u>should not</u> be subject to Export Administration Regulations?	Yes	No	NA
4.b	If "Yes" to the above, please provide an <u>explanation</u> in the space provided.	Explanation		

Section 12.b Comment:

Section 13

Research and Development—U.S. Located Producers Only

13.a R&D Expenditures and Funding for Overall U.S. Machine Tool Business

[☑ here if your company does not perform any R&D](#)

Instructions: Please provide a break-out of your company’s research and development (R&D) expenditures in support of overall machine tool product lines in years 2005-2009. This question is not meant for only 5-axis machine tool-related R&D, but rather for all machine tools.

Note 1: Please do not forget to provide detailed responses to the qualification questions following the R&D Funding Sources break-out.

Note 2: The annual Totals for R&D Expenditures and R&D Funding Sources should match, e.g., 2005 R&D Expenditure Totals will equal 2005 R&D Funding Sources Totals.

13.a.i		<i>Record Expenditures in \$ Thousands, e.g., inputs of \$12 = \$12,000.00</i>				
R&D Expenditures		2005	2006	2007	2008*	2009*
A.	Basic Research	\$	\$	\$	\$	\$
B.	Applied Research	\$	\$	\$	\$	\$
C.	Product Development	\$	\$	\$	\$	\$
D.	Process Development	\$	\$	\$	\$	\$
E.	Total	\$	\$	\$	\$	\$

Instructions: Please provide a break-out of your company’s research and development (R&D) funding sources in support of overall machine tool product lines in years 2005-2009. This question is not meant for only 5-axis machine tool-related R&D, but rather for all machine tools.

13.a.ii		<i>Record Expenditures in \$ Thousands, e.g., inputs of \$12 = \$12,000.00</i>				
R&D Funding Sources		2005	2006	2007	2008*	2009*
A.	Parent Company (or Internal)	\$	\$	\$	\$	\$
B.	Total Federal Government	\$	\$	\$	\$	\$
C.	Total State and Local Government	\$	\$	\$	\$	\$
D.	U.S. Private Entity, e.g., industry, non-profit, universities, institutes	\$	\$	\$	\$	\$
E.	Foreign, Non-Parent/Non-Subsidiary Investors	\$	\$	\$	\$	\$
F.	Other, please specify here Other	\$	\$	\$	\$	\$
G.	Total	\$	\$	\$	\$	\$

* Estimates are accepted for 2008 and 2009.

H.	Please distinguish here whether R&D <u>funding</u> for “Parent Company” originates from the parent entity, if applicable, or rather internally.	Parent	Internal
I.	Please provide some <u>examples</u> of specific kinds of R&D your company performed in the 2005-2008 period that is <u>directly related</u> to 5-axis machine tools.	R&D Examples	NA
J.	Please indicate the percentage of U.S. R&D funds being invested abroad, annually, in the period 2005-2008?	2005 % 2007 %	2006 % 2008 %

Section 13.a Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 13 **Research and Development *continued*—U.S. Located Producers Only**

13.b Machine Tool Research and Development (R&D) *continued* [☑ here if your company does not perform any R&D](#)

Instructions: Please provide specific examples of R&D projects and corresponding partners as relating to your company’s 2005-2009 “R&D Funding Sources” inputs made in Section 13.a.ii.

R&D Funding Sources		Projects	Partners	NA
1.	U.S. Federal Government	Projects	Names	NA
2.	U.S. State and Local Government	Projects	Names	NA
3.	U.S. Private Entity, e.g., industry, non-profit, universities, institutes	Projects	Names	NA
4.	Foreign, Non-Parent/Non-Subsidiary Investors	Projects	Names	NA
5.	Other, please specify here Other	Projects	Names	NA

Section 13.b Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 14

Financial Performance—U.S. Located Producers and Distributors

14. Financial Performance

Instructions: Please provide a break-out of **select** line items from your company's (A) statement of cash flows, (B) income statement, (C) balance sheet, and (D) internal business expenditures for years 2005-2008.
Record Expenditures in \$ Thousands, e.g., input of \$12 = \$12,000.00

14.a Statement of Cash Flows (Select Line Items)		2005	2006	2007	2008*
1.	Cash Flow from Operating Activities	\$	\$	\$	\$
2.	Net Cash Used by Investing Activities	\$	\$	\$	\$
3.	Acquisition of Plant and Equipment	\$	\$	\$	\$
4.	Proceeds from Disposals of Plant and Equipment	\$	\$	\$	\$
5.	Net Cash Provided by Financing Activities	\$	\$	\$	\$
6.	Cash and Cash Equivalents at End of Year	\$	\$	\$	\$
14.b Income Statement (Select Line Items)		2005	2006	2007	2008*
1.	Net Sales (and other revenue)	\$	\$	\$	\$
2.	Cost of Goods Sold	\$	\$	\$	\$
3.	Gross Profit	\$	\$	\$	\$
4.	Selling General and Administrative	\$	\$	\$	\$
5.	Total Operating Expenses	\$	\$	\$	\$
6.	Operating Income	\$	\$	\$	\$
7.	Total Non-Operating Expenses	\$	\$	\$	\$
8.	Income Before Income Taxes	\$	\$	\$	\$
9.	Net Income	\$	\$	\$	\$
14.c Balance Sheet (Select Line Items)		2005	2006	2007	2008*
1.	Inventories	\$	\$	\$	\$
2.	Total Current Assets	\$	\$	\$	\$
3.	Property, Plant, and Equipment	\$	\$	\$	\$
4.	Total Non-Current Assets	\$	\$	\$	\$
5.	Total Assets (formula)	Excel Formula	Excel Formula	Excel Formula	Excel Formula
6.	Long-Term Debt (current portion due in one year)	\$	\$	\$	\$
7.	Total Current Liabilities	\$	\$	\$	\$
8.	Long-Term Debt (less current portion)	\$	\$	\$	\$
9.	Total Non-Current Liabilities	\$	\$	\$	\$
10.	Total Liabilities	\$	\$	\$	\$
11.	Retained Earnings	\$	\$	\$	\$
12.	Total Owners' Equity	\$	\$	\$	\$
14.d Select Expenditures		2005	2006	2007	2008*
1.	Total [Local, State, Federal] Regulatory Expenditures	\$	\$	\$	\$
2.	Total Product Liability Premium Expenditures	\$	\$	\$	\$

* Estimates are accepted for 2008.

Section ? Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 15 Employment—U.S. Located Producers and Distributors

15.a Machine Tool-Related Employment

Instructions: Please first, indicate the total number of full time equivalent (FTE) employees in your U.S./domestic operations by labor type for the 2005-2009* period; and second, provide the average age of employees in each classification/group.

Important Note 1: Please make use of “Other” for additional labor categories, if needed.

Important Note 2: “Total in U.S. Operations” should comprise all preceding labor categories. If not, please indicate why in the comment box.

Employment Classifications	2005		2006		2007		2008*		2009*
	Number	Age	Number	Age	Number	Age	Number	Age	Number
1. Management/Admin/HR/Legal	#	#	#	#	#	#	#	#	#
2. Marketing/Sales	#	#	#	#	#	#	#	#	#
3. Production/Assembly	#	#	#	#	#	#	#	#	#
4. Engineering/Design/Research	#	#	#	#	#	#	#	#	#
6. Other [please indicate here]	#	#	#	#	#	#	#	#	#
7. Total in U.S. Operations	#	#	#	#	#	#	#	#	#

* Estimates are accepted for 2008 and 2009.

Section 15.a Comment:

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 15 Employment continued—U.S. Located Producers and Distributors

15.b Labor Practices

Instructions: Please respond to the following questions regarding your company's employment practices. Provide "Yes," "No," or "Not Applicable" and narrative responses where appropriate.

Questions		Yes	No	NA
1.a	Does your company have a difficult time <u>hiring skilled labor</u> ?	Yes	No	NA
1.b	If "Yes" to the above, please provide an explanation of the <u>impact</u> of "skilled labor <u>shortage</u> " on your company's <u>competitiveness</u> .	Explanation		
2.	Please identify <u>three predominant factors/influences</u> —in relation to maintaining a skilled labor force in the machine tool industry—affecting your company's <u>competitiveness</u> . Explain each.	Factor 1 Explanation 1	Factor 2 Explanation 2	Factor 3 Explanation 3
3.a	Does your company offer <u>apprenticeships</u> or <u>technical training programs</u> , or have <u>partnerships</u> with local high/vocational schools or community colleges to provide on-the-job training for prospective employees?	Yes	No	NA
3.b	If "Yes" to the above, please provide a detailed description of the program(s).	Program Description		
4.a	Please indicate 1-5 how <u>overall U.S. training programs</u> for <u>engineers</u> and/or <u>machine operators/machinists</u> compare to the training programs offered in non-U.S. countries.	1. U.S. Best	3. No Difference 4. Non-U.S. Better	5. Non-U.S. Best
4.b	Please <u>explain</u> your response in the space provided.	Explanation		
Section 15.b Comment:				

BUSINESS CONFIDENTIAL – Per Section 705(d) of the Defense Production Act

Section 16

Certification Page—All Survey Participants

January 31, 2008
Machine Tool Survey

Instructions: The undersigned certifies that the information herein supplied in response to this questionnaire is complete and correct to the best of his/her knowledge. It is a criminal offense to willfully make a false statement or representation to any department or agency of the United States Government as to any matter within its jurisdiction. [18 U.S.C.A. 1001 (1984 & SUPP. 1197)]

Company or Organization Name		Internet Address	
Name of Authorizing Official		Title of Authorizing Official	
Phone Number		Fax Number	
Point of Contact		Title	
Email Address		Phone Number	Extension

How many hours did your company dedicate to completion of the 5-axis machine tool survey?

Number of Hours

Comments (optional)

Instructions: In the space below, please provide any additional comments or any other information you wish to include regarding your participation in the acquisition, operation, or management of 5-axis machine tools or other related issues that impact your procurement, production, or supply-chain activities in the U.S. machine tool industry.

Section 16 Comment: