# CUTTING TOOL ENGINEERING

# **BRAND REPORT**

FOR THE 6 MONTH PERIOD ENDED DECEMBER 2016



No attempt has been made to rank the information contained in this report in order of importance, since BPA Worldwide believes this is a judgment which must be made by the user of the report.

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**CUTTING TOOL ENGINEERING** is a B2B brand intended for individuals with broad-based interests in metal working industries. The brand content and editorial scope of the publication includes news and industry comment, in-depth technical articles, industry round-up and special features. The content of every issue is also available to subscribers globally via the online digital version.

#### **FIELD SERVED**

**CUTTING TOOL ENGINEERING** serves manufacturing plants in the metal working industries within the following North American Industrial Classification System: 331, 332, 333, 334, 335, 336, 337 and 339. Also served are other manufacturing and non-manufacturing businesses as reported in Paragraph 3a herein.

#### **DEFINITION OF RECIPIENT OUALIFICATION**

Qualified recipients are their Corporate Managers, Engineering Managers, Engineering Department Personnel, Production Managers, Production Department Personnel, Design/R&D Personnel, Purchasing Personnel, Quality Assurance/Control Personnel and Other Titles.

# **CHANNELS**

## CUTTING TOOL ENGINEERING MAGAZINE

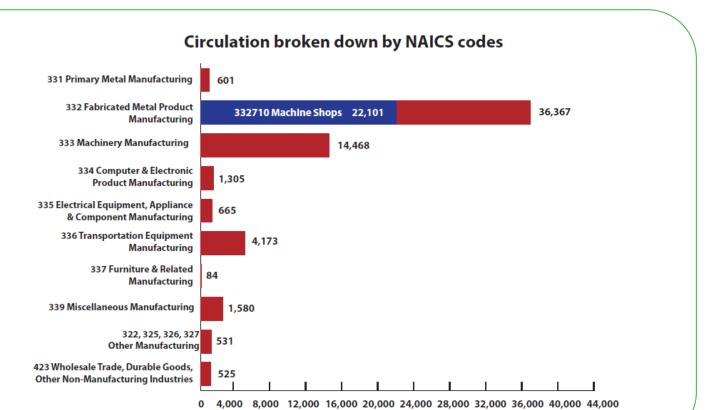


6 Issues in the period 62.330 average circulation

# **EXECUTIVE SUMMARY**

Below are the Average contacts per occurrence, including frequency per period reported

	Non-Paid	Paid	Average
CUTTING TOOL ENGINEERING MAGAZINE (6 issues in the period)	62,325	5	62,330
a. Print	60,856	5	60,861
b. Digital	1,469	-	1,469
1. Requested	1,469	-	1,469
2. Non-Requested	-	-	-



			TOTAL	
CLASSIFICATION BY TITLE	Print	Digital	TOTAL QUALIFIED	PERCENT
Corporate Manager (Owner, Chairman, President, VP, GM or other Corporate Manager)	38,706	757	39,463	65.4
Engineering Manager (Supervise Engineering Personnel)	3,684	120	3,804	6.3
Engineering Department Personnel (Non-Supervisory Position)	4,328	77	4,405	7.3
Production Manager (Supervise Production Personnel)	6,185	117	6,302	10.5
Production Department Personnel (Non-Supervisory Position)	2,672	49	2,721	4.5
Design, R&D Personnel	1,049	47	1,096	1.8
Purchasing Personnel	986	24	1,010	1.7
Quality Assurance, Control Personnel	801	14	815	1.4
Other Titled & Non-Titled Personnel	667	16	683	1.1
TOTAL QUALIFIED CIRCULATION	59,078	1,221	60,299	100.0

	(	Qualified Withi	n				
QUALIFICATION SOURCE	1 Year	2 Years	3 Years	Print	Digital	Total Qualified	Percent
I. Direct Request:	52,468	7,831	-	59,078	1,221	60,299	100.0
II. Request from recipient's company:	-	-	-	-	-	-	-
III. Membership Benefit:	-	-	-	-	-	-	-
IV. Communication from recipient or recipient's company (other than request):	-	-	-	-	-	-	-
V. <b>TOTAL</b> – Sources other than above (listed alphabetically):	-	-	-	-	-	-	-
Association rosters and directories	-	-	-	-	-	-	-
Business directories		-	-	-	-	-	-
Manufacturer's, distributor's, and wholesaler's lists	-	-	-	-	-	-	-
Other sources		-	-	-	-	-	
VI. Single Copy Sales:	-	-	-	-	-	-	-
TOTAL QUALIFIED CIRCULATION	52,468	7,831	-	59,078	1,221	60,299	100.0
PERCENT	87.0	13.0	-	98.0	2.0	100.0	

#### 3c. MAILING ADDRESS BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF DECEMBER 2016 Total Qualified MAILING ADDRESS Print Digital Percent Individuals by name and title and/or function 59,016 1,176 60,192 99.8 Individuals by name only 62 45 107 0.2 Titles or functions only Company names only Multi-Copy Same Addressee copies Single Copy Sales 1,221 **TOTAL QUALIFIED CIRCULATION** 59,078 60,299 100.0

	Audited Data	Audited Data	Audited Data	Audited Data	Circulation Claim	Circulation Claim
6-Month Period Ended:	January – June 2014	July – December 2014	January – June 2015	July – December 2015	January – June 2016*	July - December 2016*
otal Audit Average Qualified:	58,579	61,674	60,326	60,994	60,105	62,330
ualified Non-Paid:	58,574	61,668	60,321	60,990	60,100	62,325
Print:	50,737	56,133	57,797	59,114	58,401	60,856
Digital:	7,837	5,535	2,524	1,876	1,699	1,469
ualified Paid:	5	6	5	4	5	5
Print:	5	6	5	4	5	5
Digital:	-	-	-	-	-	-
ost Expire Copies included in otal Qualified Circulation:	**NC	**NC	**NC	**NC	**NC	**NC
verage Annual Order Price:	\$100.38	\$93.89	\$102.50	\$98.12	\$98.46	\$102.95

State	Print	Digital	Total Qualified	Percent	State	Print	Digital	Total Qualified	Percent
Maine	267	-	267		Kentucky	764	-	764	
New Hampshire	435	-	435		Tennessee	1,108	-	1,108	
Vermont	139	-	139		Alabama	800	-	800	
Massachusetts	1,335	-	1,335		Mississippi	295	-	295	
Rhode Island	218	-	218		EAST SO. CENTRAL	2,967	-	2,967	4.9
Connecticut	1,007	1	1,008		Arkansas	412	-	412	
NEW ENGLAND	3,401	1	3,402	5.7	Louisiana	649	-	649	
New York	2,140	1	2,141		Oklahoma	822	-	822	
New Jersey	1,090	-	1,090		Texas	3,808	1	3,809	
Pennsylvania	3,051	3	3,054		WEST SO. CENTRAL	5,691	1	5,692	9.5
MIDDLE ATLANTIC	6,281	4	6,285	10.4	Montana	177	-	177	
Ohio	4,371	1	4,372		Idaho	264	-	264	
Indiana	2,476	1	2,477		Wyoming	89	-	89	
Illinois	4,407	8	4,415		Colorado	743	1	744	
Michigan	4,479	4	4,483		New Mexico	185	-	185	
Wisconsin	2,765	-	2,765		Arizona	751	-	751	
EAST NO. CENTRAL	18,498	14	18,512	30.7	Utah	470	1	471	
Minnesota	1,777	-	1,777		Nevada	236	-	236	
Iowa	881	1	882		MOUNTAIN	2,915	2	2,917	4.8
Missouri	1,224	-	1,224		Alaska	26	-	26	
North Dakota	113	-	113		Washington	996	-	996	
South Dakota	190	-	190		Oregon	729	-	729	
Nebraska	335	-	335		California	5,706	1	5,707	
Kansas	609	-	609		Hawaii	24	-	24	
WEST NO. CENTRAL	5,129	1	5,130	8.5	PACIFIC	7,481	1	7,482	12.4
Delaware	81	1	82		UNITED STATES	58,983	26	59,009	97.9
Maryland	434	-	434		U.S. Territories	27	1	28	
Washington, DC	7	-	7		Canada	67	967	1,034	
Virginia	689	-	689		Mexico	-	35	35	
West Virginia	223	-	223		Other International	1	192	193	
North Carolina	1,468	-	1,468		APO/FPO	-	-	-	
South Carolina	757	1	758						
Georgia	1,094	-	1,094		TOTAL QUALIFIED	E0.070	4 004	60.000	100.0
Florida	1,867	-	1,867		CIRCULATION	59,078	1,221	60,299	100.0
SOUTH ATLANTIC	6,620	2	6.622	11.0					

## ADDITIONAL DATA

#### **METHOD OF DISTRIBUTION:**

All qualified circulation conforms to the field served and definition of recipient's qualification, as reported. Print copies are distributed via postal services or other carriers. Recipients of the digital version are notified via email when the Version is available.

### STATEMENT OF CONTENT PLATFORM:

Editorial Replica - If a print edition exists, editorial and design are unchanged from the original print edition. Each issue's content and design are identical to the original edition. Apart from minor updates, the content cannot change once the issue is made available.

### PUBLISHER'S AFFIDAVIT

We hereby make oath and say that all data set forth in this statement are true.

Don Nelson, Publisher

Andrea Karges, Circulation Director

(At least one of the above signatures must be that of an officer of the publishing company or its authorized representative.)

**IMPORTANT NOTE:** 

This unaudited brand report has been checked against the previous audit report. It will be included in the annual audit made by BPA Worldwide.

February 1, 2017 Date signed

State Illinois County Cook

Received by BPA Worldwide February 1, 2017

Type BD C164B0D6 **ID Number** 

About BPA Worldwide:

A not-for-profit organization since 1931, BPA Worldwide is governed by a tripartite board comprised of media owners, advertising agencies and advertisers. Headquartered in Shelton, Connecticut, USA, BPA has the largest membership of any media-auditing organization in the world, spanning more than 30 countries. Globally, BPA audits media properties including consumer magazines, newspapers, web sites, events, email newsletters, databases, wireless, social media and other advertiser-supported media—as well as advertiser and agency members. Visit www.bpaww.com for the latest audit reports, membership information and publishing and advertising industry news.

# **MAGAZINE CHANNEL**

# Official Publication of: Society of Carbide & Tool Engineers Established: 1955/Issues Per Year: 12

	AVERAGE NON-QUALIFIED	CIRCULATION	
_	NON-QUALIFIED Not Included Elsewhere	Copies	
	Other Paid Circulation	86	
	Advertiser and Agency	1,588	
	Allocated for Trade Shows and Conventions		
	All Other	13,536	
	TOTAL	15,210	

1. AVERAGE QUALIFIED C					0 116	
	Total Q	ualified	Qualified	Non-Paid	Qualifi	ed Paid
QUALIFIED CIRCULATION	Copies	Percent	Copies	Percent	Copies	Percent
Individual	62,330	100.0	62,325	100.0	5	-
Sponsored Individually Addressed	-	-	-	-	-	-
Membership Benefit	-	-	-	-	-	-
Multi-Copy Same Addressee	-	-	-	-	-	-
Single Copy Sales	-	-	-	-	-	-
TOTAL QUALIFIED CIRCULATION	62,330	100.0	62,325	100.0	5	-

2016 Issue	Number Removed	Number Added	Print	Digital	Total Qualified
July	2,235	2,176	58,565	1,522	60,087
August	2,367	2,423	58,600	1,543	60,143
September	2,885	2,826	58,562	1,522	60,084
October	1,162	5,394	62,818	1,498	64,316
Buyers Guide	73	4,809	67,546	1,506	69,052
December	13,493	4,740	59,078	1,221	60,299
T	OTAL 22,215	22,368			

3a. BUSINESS/OCCUPATIONAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF DECEMBER 2016

This issue is 3.9% or 2,437 copies below the average of the other 5 issues reported in Paragraph 2.

North American Industrial Classification System (NAICS) is a numerical coding system developed jointly by the Economic Classification Policy Committee of the Office of Management and Budget as well as Statistics Canada and Mexico. Copies of the NAICS Manual can be purchased from the Superintendent of Documents of the U.S. Government Printing Office, Washington, D.C. 20402 (Classification based on 2012 NAICS Manual).

					Corporate															
NAICS CODE 331 Primary Metal Manufacturing	TOTAL QUALIFIED	PERCENT OF TOTAL	Print	Digital	Manager (Owner, Chairman, President, VP, GM or other Corporate Manager)	Engineering Manager (Supervise Engineering Personnel)	Engineering Department Personnel (Non- Supervisory Position)	Production Manager (Supervise Production Personnel)	Production Department Personnel (Non- Supervisory Position)	Design, R&D Personnel	Purchasing Personnel	Quality Assurance, Control Personnel	Other Titles & Non-Titled Personnel	1 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 and over	Undefined
	59		57	_	0.4	2	6	10	0	2	4	2	2	17		2	7	Δ	20	
331110 Iron and Steel Mills and Ferroalloy Manufacturing 331210 Iron and Steel Pipe and Tube Manufacturing from Purchased Steel	27		26		24 16	3	0	10	9		1	2		11	0	3	,	4	20	
331210 Iron and Steel Pipe and Tube Manufacturing from Purchased Steel 331221 Rolled Steel Shape Manufacturing	73		68	5	28	12	13	3	7	1	1	1	-	0	14	10	23	12		-
331222 Steel Wire Drawing	13		10	5	20	12	13	0	1	3	1		•	9	14	10	23	12	5	-
	10		70	1	1	1	2	1	1	2	1	-	-	3	2	5	<u>.</u>	1	б	-
331313 Alumina Refining and Primary Aluminum Production 331314 Secondary Smelting and Alloying of Aluminum	4		3		1	1		- 1	-	-	-	-	-		1	-	-		-	
331314 Secondary Smelting and Alloying of Aluminum 331315 Aluminum Sheet, Plate, and Foil Manufacturing	10		10	-	- 1	- 1	-	T	-	-	-	•	-	1	-	-	-	-	- 1	-
331318 Other Aluminum Rolling, Drawing, and Extruding	52		52	-	15	11	1/	2 7	2		-	- 2	•	7	3	- 1	3 15	1/	1	
331410 Nonferrous Metal (except Aluminum) Smelting and Refining	9		52	-	3	1	3	1	3	1	-	2	-	,	0	4	12	14	4	-
331420 Copper Rolling, Drawing, Extruding, and Alloving	11		10	- 1	3	1	3	-	1		-	- 1	-		2	-	3		1	-
	15		15	_	4	-	4	2	-	- 1	-		-	-	3		4	-	2	1
331491 Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding 331492 Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)			14	-	5	- 1		5	-		3	-	- 1	6	1	5		-	2	
331511 Iron Foundries	65		64	- 1	14		12	13	10	5	-	-	1	7	17	3	13		17	- 2
	00		24		14	0	10	13	10	5		-	1	1	17	1	13	3	10	
331512 Steel Investment Foundries 331513 Steel Foundries (except Investment)	24		24 27	1	13	4	TO .	4	7	-	1	-	-	10	2	1	5	1	70	2
331523 Nonferrous Metal Die-Casting Foundries	26 87		83	1	26	, o	32	10	1	- 1		2	•	16	10	7	21	17	15	1
331524 Aluminum Foundries (except Die-Casting)	53		51	4	23	5	32 7	10	4	2	2	3	1	13	15	,	14	2	15	1
331529 Other Nonferrous Metal Foundries (except Die-Casting)	51		47	Z	25 25	2	7	10		2	2	1	1	16	9	15	8	2	1	
Sub-Total NAICS 33.		1.0	579	22	215	62	124	92	51	26	13	13	5	123	104	79	131	66	90	-
332 Fabricated Metal Product Manufacturing	<b>T</b> 001	1.0	519	22	213	02	124	92	31	20	13	13	3	123	104	19	131	00	90	•
332111 Iron and Steel Forging	163		159	4	83	22	16	22	6	8	1	2	3	51	24	20	34	22	0	4
332112 Nonferrous Forging	18		159	4	12	22	2	22	0	•	1	2	3	51	24	20	4	22	0	4
332114 Custom Roll Forming	16 7		11	1	4	2	-	2	2	1	-	-	-	<i>'</i>	2	- 1	4	1	4	-
332117 Custoff Roll Forming 332117 Powder Metallurgy Part Manufacturing	1		1	-		- 1		2	-					5	- 1	1	1	- 1	-	
	939		934	-	615	72	- 59	112	29	10	13	- 17	12	449	1	140	75	23	- 6	36
332119 Metal Crown, Closure, and Other Metal Stamping (except Automotive) 332215 Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing	54		53	5	38	12	29	4	29	10		1/	12	33	210	140	75	23	9	36
332216 Saw Blade and Handtool Manufacturing	312		292	20	191	15	32	32	-	19	9	4	2	150	49	38	30	13	25	7
	117		110	20	91	12	32 4	10	0	19	9	4		69	18	11	6	8	25	4
332311 Prefabricated Metal Building and Component Manufacturing 332312 Fabricated Structural Metal Manufacturing	2,817		2,785	32	2,292	97	57	225	54	15	41	19	17	1.666	640	263	127	30	27	64
332312 Plate Work Manufacturing	318		312	52	2,292	17	21	34	54	13	41	19	1	135	80	44	28	20	21	2
332321 Metal Window and Door Manufacturing	246		240	6	207	7	7	10	10	2	1	1		141	51	19	16	20	10	1
332322 Sheet Metal Work Manufacturing	1,943		1,926	17	1,577	60	52	152	43	0	28	12	11	1,193	408	185	80	13	10	55
332323 Ornamental and Architectural Metal Work Manufacturing	685		676	11	616	11	7	34	43	0 /	20	12	2	549	84	17	17	13	7	55
332410 Power Boiler and Heat Exchanger Manufacturing	95		91	1	57	11	0	1/	2	2	3	2	2	35	29	12	1/	6	6	3
332420 Metal Tank (Heavy Gauge) Manufacturing	133		129	4	97	0	7	10	4	1	-	1		55	37	18	14	2	6	-
332431 Metal Can Manufacturing	32		31	1	17	2	2	Ω	1	1	3	1		7	Ω Ω	5	5	1	2	4
332439 Other Metal Container Manufacturing	55		54	1	41	2	2	6	3	1	1		-	28	12	7	3	2		3
332510 Hardware Manufacturing	277		277		193	16	23	24	12	3	1	3	2	138	58	37	15	20	Ω.	1
332613 Spring Manufacturing	117		115	2	78	7	6	10	12	3	2	3	1	49	24	17	15	5	4	3
332618 Other Fabricated Wire Product Manufacturing	269		264	5	214	7	8	20	10	2	5	1	2	137	62	41	18	5	4	2
332710 Machine Shops	22,101		21,770	331	15,889	1.045	841	2,254	1,076	184	374	331	107	15.640	3,554	1,506	810	143	87	361
332721 Precision Turned Product Manufacturing	1,186		1,176	10	721	93	101	163	50	11	18	25	4	577	304	137	124	17	3	24
332722 Bolt, Nut, Screw, Rivet, and Washer Manufacturing	326		318	8	201	19	26	43	18	4	7	4	4	132	70	41	46	16	15	-6
332811 Metal Heat Treating	183		180	3	131	11	5	23	6	-	1	4	2	88	57	15	14	4	2	3
332812 Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturer			911	6	777	15	18	65	13	1	8	2	12	642	156	72	27	4	á	7
332813 Electroplating, Polishing, Anodizing, and Coloring	867		861	6	753	16	2	59	13	2	10	٩	3	584	178	59	32	3	2	á
332911 Industrial Valve Manufacturing	217		212	5	113	19	36	31	10	-	5	2	1	67	47	19	40	22	20	2
332912 Fluid Power Valve and Hose Fitting Manufacturing	137		134	3	58	11	19	26	9	5	2	7	-	43	18	25	28	7	14	2
332913 Plumbing Fixture Fitting and Trim Manufacturing	89		87	2	56	10	13	Δ	2	2		2		37	8	5	14	12	11	2
332919 Other Metal Valve and Pipe Fitting Manufacturing	270		268	2	123	24	44	40	19	5	3	7	5	98	41	26	50	22	27	6
332991 Ball and Roller Bearing Manufacturing	157		155	2	38	25	43	28	8	9	3	1	2	27	21	28	29	23	28	1
332992 Small Arms Ammunition Manufacturing	39		39	-	31	2 2	1	20	1	1	-		1	29	3	20	2	1	4	
332993 Ammunition (except Small Arms) Manufacturing	19		19		8	3	4	3	_	1		-	_	8	2	1	2	1	4	1
332994 Small Arms, Ordnance, and Ordnance Accessories Manufacturing	316		316		198	17	32	37	14	9	5	3	1	177	47	38	15	9	26	4
332996 Fabricated Pipe and Pipe Fitting Manufacturing	244		242	2	187	9	11	23	9	1	1	3	_	111	69	32	17	10	4	1
332999 All Other Miscellaneous Fabricated Metal Product Manufacturing	698		679	19	551	24	36	42	14	13	0	5	1	424	123	73	45	15	12	6
	030			19							9	: :	4						406	
Sub-Total-NAICS-33.	2 36,367	60.3	35,843	524	26,483	1,709	1,547	3,575	1,463	340	561	487	202	23,581	6,498	2,957	1,799	499		627

CLASSIFICATION BY TITLE

CLASSIFICATION BY EMPLOYEE SIZE

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									CLASSIFICATION E	BY TITLE						CLASSIF	FICATION BY EMPL	OYEE SIZE		
					Corporate Manager (Owner, Chairman		Engineering	Production	Production											
					Chairman, President, VP, GM or other	Engineering Manager (Supervise	Department Personnel (Non-	Manager (Supervise	Department Personnel (Non-			Quality Assurance,	Other Titles &							
NAICS CODE	TOTAL QUALIFIED	PERCENT OF TOTAL	Print	Digital	Corporate Manager)	Engineering Personnel)	Supervisory Position)	Production Personnel)	Supervisory Position)	Design, R&D Personnel	Purchasing Personnel	Control Personnel	Non-Titled Personnel	1 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 and over	Undefined
333 Machinery Manufacturing	731	OI TOTAL	713	Digital 18	471	54	61	81	20	22	13	reisonnei	reisonnei		129	47	44	24	53	22
333112 Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	57		57		35	3	6	5	3	3	-	2	-	412 20	5	11	7	5	8	1
333120 Construction Machinery Manufacturing 333131 Mining Machinery and Equipment Manufacturing	562 168		546 161	16 7	295 91	47 16	92 22	52 26	29 8	15 1	17 4	9	-	236 60	97 37	56 18	34 26	33 6	94 11	12 10
333132 Oil and Gas Field Machinery and Equipment Manufacturing 333241 Food Product Machinery Manufacturing	534 199		513 194	21 5	276 101	41 22	44 19	98 29	31 12	12 9	13 4	12 2	7	215 66	108 48	55 34	48 26	28 14	60 8	20 3
333242 Semiconductor Machinery Manufacturing 333243 Sawmill, Woodworking, and Paper Machinery Manufacturing	46 145		46 138	7	14 87	8 8	13 8	2 25	2 10	5 3	2	1 2	1	14 70	5 29	4 21	4 8	5 8	7 7	7 2
333244 Printing Machinery and Equipment Manufacturing 333249 Other Industrial Machinery Manufacturing	109 518		107 512	2 6	72 307	3 44	10 46	12 58	4 23	5 16	2 10	- 5	1 9	57 259	28 91	11 72	5 49	5 21	- 16	3 10
333314 Optical Instrument and Lens Manufacturing 333316 Photographic and Photocopying Equipment Manufacturing	119 41		115 41	4	75 31	8	8 4	13 1	10	2		1	2	62 28	22 6	13 2	12 1	4 1	4	2 1
333318 Other Commercial and Service Industry Machinery Manufacturing 333413 Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	399 125		393 118	6 7	276 83	25 8	29 12	39 14	14	7	4	2	3	222 67	74 22	35 11	42 12	8 6	12 4	6
333414 Heating Equipment (except Warm Air Furnaces) Manufacturing Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration	68		67	1	48	3	9	4	1	_	1	1	1	33	14	6	8	2	1	4
333415 Equipment Manufacturing	201 704		197 683	4 21	120 406	19 61	30 43	10 99	6 45	9 17	2	5 12	-	80 357	33	15 78	22 53	14	36	1 14
333514 Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	2,934		2,860	74	1,892	190	139	349	217	52	47	26	22	1,834	191 566	239	162	33	44	56
333515 Cutting Tool and Machine Tool Accessory Manufacturing 333517 Machine Tool Manufacturing	2,251 1,202		2,155 1,169	96 33	1,235 681	209 114	229 120	232 142	77 38	84 34	42 29	30 12	113 32	989 593	469 242	247 120	265 114	121 58	127 51	33 24
333519 Rolling Mill and Other Metalworking Machinery Manufacturing 333611 Turbine and Turbine Generator Set Units Manufacturing	212 105		209 103	2	120 41	22 18	19 24	18 13	16 4	6 4	3 1	3	5	105 30	44 18	27 10	16 10	10 8	28	6 1
333612 Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing 333613 Mechanical Power Transmission Equipment Manufacturing	190 188		177 179	13 9	95 75	15 18	25 32	26 26	19 23	4	1 6	4 1	1 4	73 52	35 42	32 27	34 33	11 24	5 8	2
333618 Other Engine Equipment Manufacturing 333911 Pump and Pumping Equipment Manufacturing	166 273		161 268	5 5	52 146	25 25	47 31	10 30	10 18	12 8	2 8	7 3	1 4	47 109	7 53	6 37	12 32	19 26	74 13	1 3
333912 Air and Gas Compressor Manufacturing 333913 Measuring and Dispensing Pump Manufacturing	144 15		142 15	2	60 7	19	24 5	18 2	9	7	3 1	2	2	43 2	18 2	18 3	18 8	23	24	
333921 Elevator and Moving Stairway Manufacturing 333922 Conveyor and Conveying Equipment Manufacturing	55 185		53 179	2 6	37 123	4 15	1 14	7 21	2 8	3	- 2	-	1	23 78	15 44	9	3 15	3	- 4	2
333923 Overhead Traveling Crane, Hoist, and Monorail System Manufacturing 333924 Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	121 122		119 119	2	67 72	15 7	13 22	12 10	8 3	3	3	- 2	- 1	52 45	25 17	11 11	13 15	3	15 29	2
333991 Power-Driven Handtool Manufacturing 333992 Welding and Soldering Equipment Manufacturing	108 97		108 96	-	41 61	9	26	10 10	7	7	5	2	1	33	10 21	22 13	10	6	26 11	1
333993 Packaging Machinery Manufacturing	169		165	4	85	11 20	21	29	8	2	4	-	-	70	33	33	19	6	7	1
333994 Industrial Process Furnace and Oven Manufacturing 333995 Fluid Power Cylinder and Actuator Manufacturing	94 175		92 164	11	66 80	12 11	24	37	13	2	4	2	2	49 61	16 44	16 19	35	15	-	1
333996 Fluid Power Pump and Motor Manufacturing 333997 Scale and Balance (except Laboratory) Manufacturing	132 26		129 26	-	45 16	8 1	46 2	14 2	11 2	1	1	-	1	40 15	3	10 1	27 2	18 1	27 3	1
333999 All Other Miscellaneous General Purpose Machinery Manufacturing  Sub-Total NAICS 333	778 14,468	24.0	756 14,045	22 423	502 8,387	75 1,215	54 1,383	76 1,671	24 742	16 385	15 274	4 165	12 246	442 7,088	160 2,832	70 1,501	59 1,314	17 611	13 843	17 279
334 Computer and Electronic Product Manufacturing 334111 Electronic Computer Manufacturing	24		23	1	17	2	2	3	-	-			-	16	2	-	2	-	4	-
334112 Computer Storage Device Manufacturing 334118 Computer Terminal and Other Computer Peripheral Equipment Manufacturing	15 68		14 67	1 1	4 34	1 10	8 13	1 3	1	1 6	-	- 1	-	3 29	3 13	- 1	1 7	4	6 13	2
334210 Telephone Apparatus Manufacturing 334220 Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	16 81		15 80	1 1	11 45	3 6	- 11	1 9	- 5	1 4	-	1	-	6 31	5 12	4 8	- 8	- 5	- 17	1
334290 Other Communications Equipment Manufacturing 334310 Audio and Video Equipment Manufacturing	53 38		52 35	1 3	34 28	3 2	4 2	7	2 1	1 2	1	1	-	24 23	10 5	9 4	5 5	3	2 1	-
334412 Bare Printed Circuit Board Manufacturing 334413 Semiconductor and Related Device Manufacturing	17 73		14 72	3 1	11 36	2 10	1 6	3 8	- 4	- 5	1	1	- 2	6 28	3 8	6 6	2 7	- 6	- 13	- 5
334416 Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing 334417 Electronic Connector Manufacturing	31 44		30 44	1	12 16	2	6	6	3	1	-	- 3	1	7	7	4	10 8	1 4	2	-
334418 Printed Circuit Assembly (Electronic Assembly) Manufacturing 334419 Other Electronic Component Manufacturing	38 159		37 156	1	22 86	2 12	5 17	5 25	1 10	- 7	2	1	- 1	13 61	8 36	6 18	7 21	2	2 12	- A
334510 Electromedical and Electrotherapeutic Apparatus Manufacturing	62		62	-	44	3	2	3	3	6	-	1	-	35	7	4	5	2	6	3
Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument 334511 Automatic Environmental Control Manufacturing for Recidential Commercial, and Appliance Lice.	101		100	1	31	11	25 7	11	12	8	1	2		25 20	10	7	17 5	9	33	
334512 Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling	44		43		21 60	- 1	40	18			-	2	-	40		- 5	27	-	0	2
334513 Industrial Process Variables 334514 Totalizing Fluid Meter and Counting Device Manufacturing	116 30		114 30	-	16	3	18 6	2	5	1	:	1	1	14	20 3	13 1	6	4	1	1
334515 Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals 334516 Analytical Laboratory Instrument Manufacturing	60 66		58 64	2	30 21	6	13	8 6	4	10	3	3	1	29 16	13 12	8	7	5 7	15	1
334517 Irradiation Apparatus Manufacturing 334519 Other Measuring and Controlling Device Manufacturing	17 140		15 130	2 10	7 74	1 13	3 17	16	1 10	4 5	3	2	-	5 70	1 26	1 17	2 12	9	8 4	2
334613 Blank Magnetic and Optical Recording Media Manufacturing 334614 Software and Other Prerecorded Compact Disc, Tape, and Record Reproducing	5 7		5 7	-	5 4	1	-	2	-	-	-	-	-	5 5	2	-	-	-	-	-
Sub-Total NAICS 334  335 Electrical Equipment, Appliance, and Component Manufacturing	1,305	2.2	1,267	38	669	116	177	152	73	78	15	19	6	521	218	132	169	74	163	28
335110 Electric Lamp Bulb and Part Manufacturing 335121 Residential Electric Lighting Fixture Manufacturing	11 13		10 13	1	8 10	-	2 1	1	2	-				6 10	3 2	- 1	-	1	1	-
335122 Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing 335129 Other Lighting Equipment Manufacturing	15 36		13 34	2	10 24	- 3	- 4	3	1	-	- 1	-	1 1	7 24	3	3	1 1	-	1	1
335210 Small Electrical Appliance Manufacturing 335221 Household Cooking Appliance Manufacturing	32		29 7	3	14	5	6	3	-	3	- - 1	1		13	3	1	4	1	9	1
335222 Household Refrigerator and Home Freezer Manufacturing 335224 Household Laundry Equipment Manufacturing	4		4	-	-	1	1	-	-	1	- - 1		1	-	-	-	- 2	-	4	-
335228 Other Major Household Appliance Manufacturing	7		7	-	4	2	1	-	-	-	-	-	-	3	-	1	1	-	2	-
335311 Power, Distribution, and Specialty Transformer Manufacturing 335312 Motor and Generator Manufacturing	20 103		20 93	10	44	7	25 6	15	5	1	3	1	2	36 10	15	9	19 6	17	7	-
335313 Switchgear and Switchboard Apparatus Manufacturing 335314 Relay and Industrial Control Manufacturing	45 110		42 100	3 10	22 52	3 16	6 14	8 11	5 9	1 3	2	1	2	19 56	8 16	5	7	8	3 12	2
335911 Storage Battery Manufacturing 335912 Primary Battery Manufacturing	9		9 5	1	4	2	3	2 1	-	1	-	-	-	6	1	-	1	1	1 5	-
335921 Fiber Optic Cable Manufacturing 335929 Other Communication and Energy Wire Manufacturing	6		6 4	-	2 4	2	-	1	-	1	-	-	-	1 4	2	-	1	2	-	-
335931 Current-Carrying Wiring Device Manufacturing 335932 Noncurrent-Carrying Wiring Device Manufacturing	58 19		58 18	- 1	25 11	6 3	8 1	8 2	4 1	4 1	-	2	1	11 8	12 2	10 3	16 3	4	2	3
335991 Carbon and Graphite Product Manufacturing 335999 All Other Miscellaneous Electrical Equipment and Component Manufacturing	44 109		43 109	1	12 75	7	8 11	13 9	1 2	1 3	2 2	2	-	7 65	8 17	8 13	20 2	1 3	- 6	3
Sub-Total NAICS 335	665	1.1	630	35	338	66	95	82	31	25	12	7	9	285	103	69	88	46	64	10

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										CLASSIFICATION E	BY TITLE						CLASSIF	ICATION BY EMPL	OYEE SIZE		
NAICS CODE		OTAL ALIFIED	PERCENT OF TOTAL	Print	Digital	Corporate Manager (Owner Chairman, President, VP, GM or other Corporate Manager)	Engineering Manager (Supervise Engineering Personnel)	Engineering Department Personnel (Non- Supervisory Position)	Production Manager (Supervise Production Personnel)	Production Department Personnel (Non- Supervisory Position)	Design, R&D Personnel	Purchasing Personnel	Quality Assurance, Control Personnel	Other Titles & Non-Titled Personnel	1 to 19	20 to 49	50 to 99	100 to 249	250 to 499	500 and over	Undefined
336 Transportation Equipment Manufacturing 336111 Automobile Manufacturing		119		116	3	63	8	20	8	5	7	4	1	3	61	9	3	4	10	31	1
336112 Light Truck and Utility Vehicle Manufacturing		7		7	-	3	-	1	-	1	2		-	-	2	1	-	;	-	4	
336120 Heavy Duty Truck Manufacturing 336211 Motor Vehicle Body Manufacturing		32 122		31 118	1 4	16 95	5	3 8	7	3	1	1	1	1	11 70	23	14	1 8	- 6	11 1	1
336212 Truck Trailer Manufacturing		90		89	1	65	5	6	7	1	-	2	2	2	48	15	7	13	2	5	-
336213 Motor Home Manufacturing 336214 Travel Trailer and Camper Manufacturing		8 85		7 85	1	4 63	2	- 2	1 11	-	2	2	1	-	52	2 12	10	2	- 2	1 4	3
336310 Motor Vehicle Gasoline Engine and Engine Parts Manufacturing		405		392	13	259	28	40	35	24	6	6	3	4	286	31	18	19	13	35	3
336320 Motor Vehicle Electrical and Electronic Equipment Manufacturing 336330 Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing		99 54		98 52	1 2	56 16	4	9 18	12	6	4	3	3	2	68 19	3	3	6	5	13 20	1
336340 Motor Vehicle Brake System Manufacturing		76		75	1	26	10	25	6	4	3	1	1	-	12	6	11	16	8	19	4
336350 Motor Vehicle Transmission and Power Train Parts Manufacturing		299		289	10	102	42	93	24	11	7	7	9	4	90	29	15	27	19	117	2
336360 Motor Vehicle Seating and Interior Trim Manufacturing 336370 Motor Vehicle Metal Stamping		9 95		9 95	-	61	4	12	11	3	-	2	1	1	46	8	11	14	6	9	1
336390 Other Motor Vehicle Parts Manufacturing	1	1,073		1,034	39	515	115	200	112	42	33	22	20	14	437	101	83	152	109	157	34
336411 Aircraft Manufacturing 336412 Aircraft Engine and Engine Parts Manufacturing		169 246		164 238	5	41 52	13 50	54 89	20 16	12 14	19 14	5	4	1	38 27	7 17	8 16	6 57	3 35	107 92	- 2
336413 Other Aircraft Parts and Auxiliary Equipment Manufacturing		754		728	26	279	84	146	124	56	23	15	20	7	187	132	103	167	57	100	8
336414 Guided Missile and Space Vehicle Manufacturing 336415 Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufac	de reino et	31 18		31 18	-	7	4	11	3	3	1	-	2	-	7	1	2	1	2	17 9	1
336419 Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturin	g	14		14	-	3	1	2	5	2	-	-	-	1	5	2	1	4	3 1	1	-
336510 Railroad Rolling Stock Manufacturing		58 58		57 58	1	18 13	4	12	11 15	7	-	3	3	- 2	15	13	3	9	5	13	-
336611 Ship Building and Repairing 336612 Boat Building		69		65	4	44	1	8 9	10	2	2	1	3	-	11 42	8	6	3	2	31 5	3
336991 Motorcycle, Bicycle, and Parts Manufacturing		142		138	4	92	10	12	13	6	5	2	1	1	105	6	5	5	3	15	3
336992 Military Armored Vehicle, Tank, and Tank Component Manufacturing 336999 All Other Transportation Equipment Manufacturing		22 19		21 19	1	4 17	9	2	3	2	- 1	-	2	-	6 16	3	2	4	4	3	-
Sub-Total N	AICS 336 4	4,173	6.9	4,048	125	1,918	420	794	473	214	142	81	85	46	1,669	442	335	527	305	826	69
337 Furniture and Related Product Manufacturing 337110 Wood Kitchen Cabinet and Countertop Manufacturing		5		E		5									1						1
337121 Upholstered Household Furniture Manufacturing		6		4	2	5	-	-	1	-	-	-	-	-	5	-	1	-	-	-	-
337122 Nonupholstered Wood Household Furniture Manufacturing		11		10	1	8	-	-	1	2	-	-	-	-	5	2	2	- 3	-	-	2
337124 Metal Household Furniture Manufacturing 337125 Household Furniture (except Wood and Metal) Manufacturing		11 4		4	-	9	2	2	-	-	-	-	-	-	-	1	-	3	-	3	1
337127 Institutional Furniture Manufacturing		10		9	1	8	-	-	-	-	1	1	-	-	5	-	-	5	-	-	-
337211 Wood Office Furniture Manufacturing 337212 Custom Architectural Woodwork and Millwork Manufacturing		5		4	1	- 3	1	-	- 1	-	-	-	-	-	2	1	3	-	-	-	-
337214 Office Furniture (except Wood) Manufacturing		8		7	1	3	-	4	1	-	-	-	-	-	-	2	2	1	1	2	-
337215 Showcase, Partition, Shelving, and Locker Manufacturing 337920 Blind and Shade Manufacturing		21		18	3	11	1	3	1	3	1	-	-	1	3	3	4	1	-	9	1
Sub-Total N	AICS 337	84	0.1	72	12	53	6	9	6	6	2	1	-	1	31	10	12	10	1	15	5
339 Miscellaneous Manufacturing		500					F-7	04	70	27	20	40	40	7					40	76	40
339112 Surgical and Medical Instrument Manufacturing 339113 Surgical Appliance and Supplies Manufacturing		562 583		558 578	4 5	247 359	57 44	81 69	70 40	37 25	39 20	12 6	12 12	, 8	193 264	85 67	64 32	79 47	46 41	76 90	19 42
339114 Dental Equipment and Supplies Manufacturing		69		66	3	33	6	5	9	8	6		1	1	36	6	6	10	4	7	
339115 Ophthalmic Goods Manufacturing 339116 Dental Laboratories		17 8		17 8	-	7	1	1	2	3	1	-	1	1	9	1	1	2	-	5	
339910 Jewelry and Silverware Manufacturing		46		46	-	31	2	1	6	4	2	-	-	-	24	8	7	1	1	5	-
339920 Sporting and Athletic Goods Manufacturing		51		51 17	-	30	4	5	3	2	5	1	1	-	28 14	2	3	5	9	4	
339930 Doll, Toy, and Game Manufacturing 339940 Office Supplies (except Paper) Manufacturing		18 36		17 34	2	13 18	5	3	7	2	1	-	-	-	14 24	4	4	3	1	-	-
339950 Sign Manufacturing		61		57	4	45	2	3	6	1	1	1	1	1	37	10	2	2	1	6	3
339991 Gasket, Packing, and Sealing Device Manufacturing 339992 Musical Instrument Manufacturing		64 20		64 18	- 2	20 13	7	15 2	11 1	7	-	1	2	1	16 11	6	9	9	10 1	12	2
339993 Fastener, Button, Needle, and Pin Manufacturing		8		8	-	6	1	-	i	-	-	-	-	-	3	2	-	-	3	-	-
339994 Broom, Brush, and Mop Manufacturing		6		6 31	-	2 20	1	2	-	1	-	-	-	-	1 21	-	3	1	-	1	-
339999 All Other Miscellaneous Manufacturing Sub-Total N	AICS 339 1	1,580	2.6	1,559	21	851	136	190	161	94	78	21	30	19	688	203	133	162	119	209	66
Other Manufacturing NAICS 322, 325, 326, 327		531	0.9	524	7	241	60	56	83	38	18	7	8	20	152	117	70	88	55	39	10
Sub-Total Other Sub-Total Manufacturing		531 9,774	0.9 99.1	524 58,567	7 1,207	241 39,155	60 3,790	56 4,375	83 6,295	38 2,712	18 1,094	7 985	8 814	20 554	152 34,138	117 10,527	70 5,288	88 4,288	55 1,776	39 2,655	10 1,102
423 Wholesale Trade, Durable Goods			20.2						2,200	2,7.22			01.								=,202
423830 Industrial Machinery and Equipment Wholesalers 423840 Industrial Supplies Wholesalers		302 222		290 220	12	178 129	12	20 10	6	7	2	11 14	- 1	66 <b>63</b>	172 124	31 52	17 19	28 11	21	32 12	1
All Other Miscellaneous Durable Goods Merchant Wholesalers		-		-		-		-		- 2	-	14	- T	-	-	-	та	- 11	4	- 12	
Other Non Manufacturing Industries	AICS 423	524	0.9	510	14	307 1	14	30	7	9	2	25	1	129	296	83	36	39	25	44	1
Other Non-Manufacturing Industries Sub-	Total Other	1	-	1	-	1	-	-	-	-	-	-		-	1	-	-	-	-	-	-
Sub-Total Non-Mar		525	0.9	511	14	308	14	30	7	0	2	25	1	129	297	83	36	39	25	44	- 1

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