

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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MODERN MACHINE SHOP is a business-to-business media brand that produces a monthly print magazine, digital media, research and live events for the machining and metalworking market. With an emphasis on applications stories and case histories, Modern Machine Shop provides insight into real world applications of metalworking technology, helping the subscriber to discover not only what the technology can do, but how it can change their business, how it can help them serve their customers better and how they can be more profitable as a business enterprise. The parent company Gardner Business Media was established with the launch of Modern Machine Shop magazine in June of 1928. To this day, the Modern Machine Shop brand is recognized around the world as a resource for metalworking product and process technology.

BRAND REPORT PURPOSE

The Brand Report provides a deeper understanding and identification of all audited touch points with customers that have interest in the brand. It is designed to present analysis of all communication channels, including a brand's unique users within each channel of, but not across, multiple media platforms. This non-integrated report contains data for each separate media channel as indicated in the Executive Summary. No attempt has been made to identify or eliminate duplication that may exist across media channels.

CHANNELS

MODERN MACHINE SHOP MAGAZINE



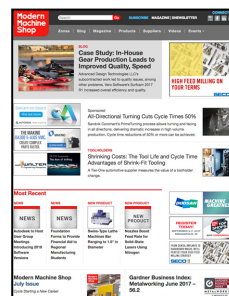
6 issues in the period
93,498 average circulation

MODERN MACHINE SHOP E-NEWSLETTERS



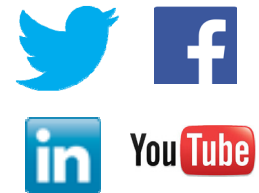
2 E-Newsletters in the period
40 total issued in the period
59,020 average per occurrence
58,950 average per occurrence

MODERN MACHINE SHOP WEBSITE



147,488 average users

MODERN MACHINE SHOP SOCIAL MEDIA



10,600 Twitter followers
11,229 Facebook likes
1,948 LinkedIn group members
353,663 YouTube views

EXECUTIVE SUMMARY

Below are the average contacts per occurrence, including frequency per period reported.

	Non-Paid	Paid	Average
MODERN MACHINE SHOP MAGAZINE (6 issues in the period)	93,498	-	93,498
MODERN MACHINE SHOP E-NEWSLETTERS			
a. MMS Extra (12 issued in the period)	59,020	-	59,020
b. The Shop - Blog (28 issued in the period)	58,950	-	58,950
MODERN MACHINE SHOP WEBSITE (Monthly Users with 272,281 average Pageviews)	147,488	-	147,488
MODERN MACHINE SHOP SOCIAL MEDIA			
a. Twitter followers	*10,600	-	*10,600
b. Facebook likes	*11,229	-	*11,229
c. LinkedIn group members	*1,948	-	*1,948
d. YouTube views	*353,663	-	*353,663

*Social Media claims are cumulative figures, not averages.

FIELD SERVED

MODERN MACHINE SHOP serves the metalworking industry. Included are plants performing metalworking operations and whose products fall in manufacturing industries. Also served are other manufacturing, wholesale trade, and professional, scientific, technical, and educational services.

DEFINITION OF RECIPIENT QUALIFICATION

Qualified recipients include corporate executives as well as company management, manufacturing production and manufacturing engineering management and departments, quality assurance and quality control management and department, product design management and department, research & development management and department, factory automation management and department, purchasing and other titled and non-titled personnel and company copies.

PURPOSE

Included herein is a supplementary analysis of recipients who responded to the question "Which of the following markets do you manufacture for?"

AVERAGE NON-QUALIFIED CIRCULATION

Non-Qualified Not Included Elsewhere	Copies
Other Paid Circulation	75
Advertiser and Agency	4,432
Allocated for Trade Shows and Conventions	483
All Other	1,458
TOTAL	6,448

1. AVERAGE QUALIFIED CIRCULATION BREAKOUT FOR PERIOD

Qualified Circulation	Total Qualified		Qualified Non-Paid		Qualified Paid	
	Copies	Percent	Copies	Percent	Copies	Percent
Individual	93,498	100.0	93,498	100.0	-	-
Sponsored Individually Addressed	-	-	-	-	-	-
Membership Benefit	-	-	-	-	-	-
Multi-Copy Same Addressee	-	-	-	-	-	-
Single Copy Sales	-	-	-	-	-	-
TOTAL QUALIFIED CIRCULATION	93,498	100.0	93,498	100.0	-	-

2. QUALIFIED CIRCULATION BY ISSUES FOR PERIOD

2018 Issue	Total Qualified
July	97,670
August	97,636
September	97,690
October	96,485
November	85,743
December	85,765

3a. BUSINESS/OCCUPATIONAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF NOVEMBER 2018

This issue is 9.8% or 9,306 copies below the average of the other 5 issues reported in Paragraph 2.

NAICS	Business and Industry	Total Qualified	Percent of Total	Manufacturing							Sales & Marketing (X,Z)	Other NEC (A,U)	
				Production		Engineering			Quality Assurance Control (P,Q)	Product Research and Development (H,I,J)			Educational or Government (N)
				Company Management, Corporate Executives and Purchasing (B,L)	Manu- facturing Production Management or Department (C,D,G,R,S)	Manu- facturing Engineering Management or Department (E,F,T,V)							
325	CHEMICAL MANUFACTURING	470	0.5										
326	PLASTICS AND RUBBER PRODUCTS MANUFACTURING												
326 (Excl. 326199)	Plastics and Rubber Products Manufacturing	522	0.6	129	157	165	9	47	1	14	-		
326199	All Other Plastics Product Manufacturing	1,561	1.8	536	484	414	15	86	3	19	4		
	Subtotal NAICS 326	2,083	2.4	665	641	579	24	133	4	33	4		
327	NONMETALLIC MINERAL PRODUCT MANUFACTURING	311	0.4	89	84	83	5	30	-	17	3		
331	PRIMARY METAL MANUFACTURING												
3311	Iron and Steel Mills and Ferroalloy Manufacturing	340	0.4	148	104	54	4	13	-	15	2		
3312	Steel Product Manufacturing from Purchased Steel	205	0.2	64	61	49	8	10	1	9	3		
3313	Alumina and Aluminum Production and Processing	212	0.3	58	61	66	5	9	1	7	5		
3314	Nonferrous Metal (except Aluminum) Production and Processing	173	0.2	56	51	45	2	12	-	7	-		
3315	Foundries	687	0.8	175	237	210	16	32	3	13	1		
	Sub-Total NAICS 331	1,617	1.9	501	514	424	35	76	5	51	11		
332	FABRICATED METAL PRODUCT MANUFACTURING												
33211	Forging and Stamping	1,119	1.3	462	332	227	34	39	1	12	12		
33221	Cutlery and Handtool Manufacturing	503	0.6	217	135	102	7	18	1	18	5		
33231	Plate Work and Fabricated Structural Product Manufacturing	856	1.0	464	222	121	12	16	-	14	7		
33232	Ornamental and Architectural Metal Products Manufacturing	781	0.9	400	204	127	10	19	1	14	6		
33241	Power Boiler and Heat Exchanger Manufacturing (pt)	53	0.1	17	13	17	-	5	-	1	-		
33242	Metal Tank (Heavy Gauge) Manufacturing	42	-	20	10	8	-	3	-	1	-		
33243	Metal Can, Box, and Other Metal Container (Light Gauge) Manufacturing	45	0.1	20	10	12	1	1	-	-	1		
33251	Hardware Manufacturing (pt)	274	0.3	90	92	70	4	11	1	5	1		
33261	Spring and Wire Product Manufacturing	284	0.3	142	60	54	2	18	-	7	1		
33271	Machine Shops	20,559	24.0	12,954	4,436	1,904	569	270	20	305	101		
33272	Turned Product and Screw, Nut and Bolt Manufacturing	2,018	2.4	926	585	318	115	30	2	36	6		
33281	Coating, Engraving, Heat Treating, and Allied Activities	594	0.7	318	135	76	15	15	-	34	1		
33291	Metal Valve Manufacturing	894	1.0	170	394	240	22	51	1	12	4		
332991	Ball and Roller Bearing Manufacturing	213	0.2	32	58	99	9	8	-	6	1		
332992	Small Arms Ammunition Manufacturing	48	0.1	13	14	15	3	2	-	-	1		
332993	Ammunition (except Small Arms) Manufacturing	35	-	7	11	10	-	6	1	-	-		
332994	Small Arms Ordnance, and Ordnance Accessories Manufacturing	328	0.4	143	87	70	5	19	-	1	3		
332996	Fabricated Pipe and Pipe Fitting Manufacturing	180	0.2	62	67	37	4	3	-	7	-		
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing (pt)	1,538	1.8	899	324	204	24	44	2	35	6		
	Sub-Total NAICS 332	30,364	35.4	17,356	7,189	3,711	836	578	30	508	156		
333	MACHINERY MANUFACTURING												
333111	Farm Machinery and Equipment Manufacturing (pt)	514	0.6	213	134	117	11	29	-	8	2		
333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing	88	0.1	38	20	24	1	4	-	1	-		
33312	Construction Machinery Manufacturing	430	0.5	122	121	131	15	32	-	7	2		
333131	Mining Machinery and Equipment Manufacturing	165	0.2	57	60	32	7	7	-	2	-		
333132	Oil and Gas Field Machinery and Equipment Manufacturing	469	0.6	175	159	98	10	19	2	5	1		
333241	Food Product Machinery Manufacturing	271	0.3	131	65	67	1	4	1	-	2		
333242	Semiconductor Machinery Manufacturing	39	0.1	11	12	13	2	-	-	1	-		
333243	Sawmill, Woodworking, and Paper Machinery Manufacturing	297	0.4	156	71	42	2	15	1	8	2		
333244	Printing Machinery and Equipment Manufacturing	108	0.1	45	36	16	-	7	-	4	-		
333249	All Other Industrial Machinery Manufacturing	999	1.2	476	214	195	10	58	3	40	3		
333314	Optical Instrument and Lens Manufacturing	185	0.2	51	47	54	11	13	-	7	2		
333316	Photographic and Photocopying Equipment Manufacturing	71	0.1	20	25	22	1	3	-	-	-		
333318	Other Commercial and Service Industry Machinery Manufacturing (pt)	552	0.7	296	100	112	2	27	1	11	3		

NAICS	Business And Industry	Total Qualified	Percent of Total	Company Management, Corporate Executives and Purchasing (B,L)	Manufacturing						
					Production		Engineering				
					Manu- facturing Production Management or Department (C,D,G,R,S)	Manu- facturing Engineering or Department (E,F,T,V)	Quality Assurance Control (P,Q)	Product Design Research and Development (H,I,J)	Educational or Government (N)	Sales & Marketing (X,Z)	Other NEC (A,U)
333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing	186	0.2	84	41	45	3	8	-	4	1
333414	Heating Equipment except Warm Air Furnaces - Manufacturing (pt)	100	0.1	41	19	30	-	9	-	1	-
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	354	0.4	170	56	85	11	24	-	7	1
333511	Industrial Mold Manufacturing	2,158	2.5	1,013	643	304	23	108	1	59	7
333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	1,904	2.2	1,004	535	236	23	55	-	38	13
333515	Cutting Tool and Machine Tool Accessory Manufacturing	1,523	1.8	664	289	243	25	79	7	198	18
333517	Machine Tool Manufacturing	1,947	2.3	894	370	419	12	57	2	187	6
333519	Rolling Mill and Other Metalworking Machinery Manufacturing	345	0.4	146	85	75	4	12	-	19	4
333611	Turbine and Turbine Generator Set Unit Manufacturing	185	0.2	44	50	74	6	8	-	3	-
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	255	0.3	76	83	64	10	12	-	9	1
333613	Mechanical Power Transmission Equipment Manufacturing	276	0.3	81	86	81	10	11	1	4	2
333618	Other Engine Equipment Manufacturing (pt)	366	0.4	165	71	98	10	18	-	3	1
333912	Air and Gas Compressor Manufacturing	168	0.2	49	58	37	8	9	2	4	1
333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing	343	0.4	83	129	101	7	15	-	8	-
333921	Elevator and Moving Stairway Manufacturing	31	-	15	5	7	-	3	-	-	1
333922	Conveyor and Conveying Equipment Manufacturing (pt)	233	0.3	70	87	43	2	17	1	12	1
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing (pt)	89	0.1	19	25	36	2	5	-	2	-
333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing	172	0.2	49	36	69	2	11	2	2	1
333991	Power-Driven Handtool Manufacturing	121	0.2	38	19	40	6	11	-	7	-
333992	Welding and Soldering Equipment Manufacturing	104	0.1	39	36	17	3	5	2	2	-
333993	Packaging Machinery Manufacturing	173	0.2	28	89	39	2	12	-	3	-
333994	Industrial Process Furnace and Oven Manufacturing	113	0.1	34	28	32	-	14	-	4	1
333995	Fluid Power Cylinder and Actuator Manufacturing	175	0.2	58	68	36	5	4	-	4	-
333996	Fluid Power Pump and Motor Manufacturing	186	0.2	40	57	71	8	6	-	4	-
333997	Scale and Balance (except Laboratory) Manufacturing	27	-	7	5	12	-	2	-	1	-
333999	All Other Miscellaneous General Purpose Machinery Manufacturing (pt)	1,216	1.4	664	273	181	6	51	-	37	4
	Sub-Total NAICS 333	16,938	19.8	7,366	4,307	3,398	261	784	26	716	80
334	COMPUTER AND ELECTRONIC PRODUCT MANUFACTURING										
3341	Computer and Peripheral Equipment Manufacturing	153	0.2	53	32	46	1	17	-	4	-
3342	Communications Equipment Manufacturing	268	0.3	63	73	93	11	24	1	2	1
3343	Audio and Video Equipment Manufacturing	41	-	18	7	13	-	3	-	-	-
3344	Semiconductor and Other Electronic Component Manufacturing	858	1.0	215	233	282	18	93	-	14	3
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	2,041	2.4	752	522	519	37	147	3	50	11
3346	Manufacturing and Reproducing Magnetic and Optical Media	45	0.1	21	8	8	-	6	-	2	-
	Sub-Total NAICS 334	3,406	4.0	1,122	875	961	67	290	4	72	15
335	ELECTRICAL EQUIPMENT, APPLIANCE, AND COMPONENT MANUFACTURING										
33511	Electric Lamp Bulb and Part Manufacturing	14	-	3	4	5	1	1	-	-	-
33512	Lighting Fixture Manufacturing	134	0.2	56	30	34	3	8	-	2	1
33521	Small Electrical Appliance Manufacturing	40	-	7	11	17	1	4	-	-	-
33522	Major Household Appliance Manufacturing	50	0.1	8	16	17	2	7	-	-	-
33531	Electrical Equipment Manufacturing	773	0.9	179	194	302	16	62	-	16	4
33591	Battery Manufacturing	45	0.1	10	11	20	1	2	-	-	1
33592	Communication and Energy Wire and Cable Manufacturing	38	-	7	8	16	1	5	-	-	1
33593	Wiring Device Manufacturing	200	0.2	31	84	65	3	14	-	3	-
33599	All Other Electrical Equipment and Component Manufacturing	328	0.4	118	78	82	1	26	-	20	3
	Sub-Total NAICS 335	1,622	1.9	419	436	558	29	129	-	41	10
336	TRANSPORTATION EQUIPMENT MANUFACTURING										
336111	Automobile Manufacturing	633	0.7	268	112	170	27	41	2	10	3
336112	Light Truck and Utility Vehicle Manufacturing	42	0.1	15	7	12	1	3	-	4	-
336120	Heavy Duty Truck Manufacturing	171	0.2	77	33	44	3	13	-	-	1
336211	Motor Vehicle Body Manufacturing (pt)	703	0.8	395	147	103	17	30	1	10	-
336212	Truck Trailer Manufacturing	552	0.7	375	92	56	5	10	-	13	1
336213	Motor Home Manufacturing	61	0.1	33	11	14	1	2	-	-	-
336214	Travel Trailer and Camper Manufacturing (pt)	206	0.2	135	34	18	4	10	-	5	-
336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing	486	0.6	244	80	110	20	18	2	12	-
336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing	628	0.7	314	106	138	24	39	-	5	2
336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing	95	0.1	35	19	33	5	2	-	-	1
336340	Motor Vehicle Brake System Manufacturing	157	0.2	52	39	46	9	9	-	1	1
336350	Motor Vehicle Transmission and Power Train Parts Manufacturing	415	0.5	149	79	135	25	20	-	6	1

NAICS	Business and Industry	Total Qualified	Percent of Total	Company Management, Corporate Executives and Purchasing (B,L)	Manufacturing		Engineering		Educational or Government (N)	Sales & Marketing (X,Z)	Other NEC (A,U)
					Production		Engineering				
					Manu- facturing Production Management or Department (C,D,G,R,S)	Manu- facturing Engineering Management or Department (E,F,T,V)	Quality Assurance Control (P,Q)	Product Design Research and Development (H,I,J)			
336360	Motor Vehicle Seating and Interior Trim Manufacturing	137	0.2	56	32	33	7	8	-	1	-
336370	Motor Vehicle Metal Stamping	462	0.5	174	114	109	39	18	-	3	5
336390	Other Motor Vehicle Parts Manufacturing	3,615	4.2	1,398	716	1,075	137	226	4	43	16
336411	Aircraft Manufacturing	805	0.9	291	148	280	26	51	3	5	1
336412	Aircraft Engine and Engine Parts Manufacturing (pt)	786	0.9	214	173	298	46	40	5	7	3
336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing	2,812	3.3	992	717	753	176	107	2	49	16
336414	Guided Missile and Space Vehicle Manufacturing	175	0.2	34	50	70	5	13	1	1	1
336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing	102	0.1	20	32	37	2	10	-	-	1
336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing	92	0.1	24	24	34	2	5	-	1	2
3365	Railroad Rolling Stock Manufacturing	161	0.2	71	33	38	4	9	-	6	-
3366	Ship and Boat Building	485	0.6	312	81	57	11	15	1	6	2
3369	Other Transportation Equipment Manufacturing	507	0.6	341	70	67	3	21	-	5	-
	Sub-Total NAICS 336	14,288	16.7	6,019	2,949	3,730	599	720	21	193	57
337	FURNITURE AND RELATED PRODUCT MANUFACTURING										
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	229	0.3	108	67	40	2	12	-	-	-
3372	Office Furniture (including Fixtures) Manufacturing	91	0.1	27	26	28	1	9	-	-	-
3379	Other Furniture Related Product Manufacturing	18	-	11	3	3	-	1	-	-	-
	Sub-Total NAICS 337	338	0.4	146	96	71	3	22	-	-	-
339	MISCELLANEOUS MANUFACTURING										
339112	Surgical and Medical Instrument Manufacturing	1,921	2.3	607	492	526	89	167	3	26	11
339113	Surgical Appliance and Supplies Manufacturing	1,110	1.3	523	198	253	39	75	-	11	11
339114	Dental Equipment and Supplies Manufacturing	488	0.6	307	55	64	16	39	-	5	2
339115	Ophthalmic Goods Manufacturing	127	0.1	61	24	27	3	6	-	1	5
339116	Dental Laboratories	603	0.7	557	12	21	-	9	-	-	4
33991	Jewelry and Silverware Manufacturing	194	0.2	152	19	14	-	4	-	2	3
33992	Sporting and Athletic Goods Manufacturing	339	0.4	202	59	37	7	25	-	8	1
33993	Doll, Toy, and Game Manufacturing	83	0.1	65	8	6	1	2	-	1	-
33994	Office Supplies (except Paper) Manufacturing	98	0.1	65	19	6	1	3	-	4	-
33995	Sign Manufacturing	638	0.7	558	48	16	-	13	-	1	2
33999	All Other Miscellaneous Manufacturing	1,163	1.4	679	201	183	16	43	-	36	5
	Sub-Total NAICS 339	6,764	7.9	3,776	1,135	1,153	172	386	3	95	44
311-324	OTHER MISCELLANEOUS MANUFACTURING	562	0.6	219	149	116	7	41	2	23	5
42	WHOLESALE TRADE	2,884	3.4	1,507	320	391	15	67	6	554	24
541	Professional, Scientific, and Technical Services	1,992	2.3	1,001	227	512	15	187	5	33	12
611	Educational Services	632	0.7	155	107	80	-	42	239	2	7
	OTHER QUALIFIED NAICS, N.E.C.	1,472	1.7	798	290	251	12	66	8	33	14
	TOTAL QUALIFIED CIRCULATION	85,743	100.0	41,297	19,424	16,146	2,085	3,593	354	2,397	447

(B,L) COMPANY MANAGEMENT, CORPORATE EXECUTIVE, PURCHASING titles include Chairman, General Manager, Owner, Partner, President, Vice President, Buyer, Purchasing Manager and Procurement Chief

(C,R) MANUFACTURING PRODUCTION MANAGEMENT, FACTORY AUTOMATION MANAGEMENT titles include Factory Manager, Machine Shop Manager, Manufacturing Manager, Manufacturing Production Manager, Plant Manager, Production Manager, Shop Manager, Tool Room Manager, Works Manager, Factory Automation Manager, Chief Factory Automation Engineer, Manager of Systems Design and Chief Systems Engineer.

(D,G,S) MANUFACTURING PRODUCTION DEPARTMENT, MANUFACTURING (OTHER MANUFACTURING PERSONNEL), FACTORY AUTOMATION ENGINEERS titles include Foreman, Department Supervisor, Manufacturing Supervisor, Master Mechanic, Plant Supervisor, Production Supervisor, Diemaker, Expediter, Leadman, Factory Automation Engineer, Automation Foreman, CNC Programmer, Systems Designer and Systems Engineer.

(E,V) MANUFACTURING ENGINEERING MANAGEMENT titles include Chief Tool Engineer, Chief of Manufacturing Development, Director of Manufacturing Engineering, Chief Methods Engineer, Manager of Process Engineering, Director of Production Engineering, Manager of Tool Design and Head of Tool Engineering.

(F,T) MANUFACTURING ENGINEERING (ENGINEERS) includes most engineering titles where the individual does not manage the department.

(P,Q) QUALITY ASSURANCE/CONTROL MANAGEMENT, ENGINEERS titles include Quality Assurance Manager, Quality Control Director, Chief of Quality Engineering, Quality Assurance Engineer, Quality Control Foreman and Quality Supervisor.

(H,I,J) PRODUCT DESIGN, RESEARCH and DEVELOPMENT MANAGEMENT, ENGINEERS, & OTHER DESIGN PERSONNEL titles include Director of Design Engineering, Chief Draftsman, Manager of Product Engineering, Director of Research, Design Project Engineer, Development Engineer, Research & Design Engineer, and Draftsman.

(N) EDUCATIONAL or GOVERNMENT titles include Professor, Instructor and other Educational titles.

(X,Z) SALES & MARKETING titles include Regional Sales Director, National Sales Director, National Accounts Manager, Marketing Director, PR Director and other sales/marketing titles.

(A,U) OTHER QUALIFIED TITLES, N.E.C.

SUPPLEMENTARY DATA FOR ISSUE OF NOVEMBER 2018

This is an analysis of 80,181 or 93.5% recipients who manufacture for the following industries. 63,897 are classified based on their response to the question 'Which of the following markets do you manufacture for?' and 16,284 are classified based on NAICS for their company indicating they are an OEM for the given market.

Business and Industry	Totals	Company Management, Corporate Executives, Purchasing (B,L)	Manufacturing Production Management or Department (C,D,G,R,S)	Manufacturing Engineering Management or Department (E,F,T,V)	Quality Assurance, Quality Control (P,Q)	Product Design, Research & Development (H,I,J)	Educational or Government (N)	Sales & Marketing (X,Z)	Other NEC (A,U)
Aerospace/Aviation									
OEMs, Components & Parts	5,148	1,686	1,235	1,600	276	253	11	67	20
Captive Shops, Contract Shops & Job Shops	38,574	17,520	9,903	7,048	1,054	1,481	46	1,320	202
Other Qualified: R&D, Consultants, Testing & Design, Q/A	4,241	2,026	541	759	28	193	119	539	36
Totals	47,963	21,232	11,679	9,407	1,358	1,927	176	1,926	258
Automotive/Transportation									
OEMs, Components & Parts	8,372	3,725	1,622	2,099	328	450	9	113	26
Captive Shops, Contract Shops & Job Shops	39,359	18,009	10,027	7,283	931	1,565	50	1,285	209
Other Qualified: R&D, Consultants, Testing & Design, Q/A	4,485	2,304	527	745	22	206	129	515	37
Totals	52,216	24,038	12,176	10,127	1,281	2,221	188	1,913	272
Medical/Dental									
OEMs, Components & Parts	4,430	2,120	824	934	154	315	3	49	31
Captive Shops, Contract Shops & Job Shops	28,555	12,424	7,509	5,403	749	1,186	41	1,087	156
Other Qualified: R&D, Consultants, Testing & Design, Q/A	3,372	1,622	400	568	17	185	88	461	31
Totals	36,357	16,166	8,733	6,905	920	1,686	132	1,597	218
Military/Defense									
OEMs, Components & Parts	841	266	230	255	19	58	2	4	7
Captive Shops, Contract Shops & Job Shops	38,073	15,761	10,096	7,920	1,169	1,604	54	1,281	188
Other Qualified: R&D, Consultants, Testing & Design, Q/A	3,565	1,602	487	669	25	177	81	488	36
Totals	42,479	17,629	10,813	8,844	1,213	1,839	137	1,773	231
Offroad/Construction/Agriculture									
OEMs, Components & Parts	1,035	376	275	272	27	65	-	16	4
Captive Shops, Contract Shops & Job Shops	43,830	20,268	10,916	8,252	1,154	1,663	54	1,311	212
Other Qualified: R&D, Consultants, Testing & Design, Q/A	3,784	1,871	493	623	23	165	107	471	31
Totals	48,649	22,515	11,684	9,147	1,204	1,893	161	1,798	247
Oil & Gas/Energy									
OEMs, Components & Parts	637	233	220	130	17	27	2	7	1
Captive Shops, Contract Shops & Job Shops	35,547	15,172	9,699	6,908	937	1,372	48	1,234	177
Other Qualified: R&D, Consultants, Testing & Design, Q/A	3,349	1,579	451	574	20	150	79	468	28
Totals	39,533	16,984	10,370	7,612	974	1,549	129	1,709	206

OEM, Components & Parts: Corresponding Industry NAICS
Captive Shops, Contract Shops & Job Shops: Respondents in Mfg NAICS (311-339) not Industry-Specific
Other Qualified: R&D, Consultants, Testing & Design, Q/A: Respondents in non-Mfg NAICS

SUPPLEMENTARY DATA FOR ISSUE OF NOVEMBER 2018

This is an analysis of 30,010 recipients in the indicated NAICS classifications, of whom 28,135 manufacture for the following industries based on their response to the question "Which of the following markets do you manufacture for?"

Contract Shops & Job Shops (NAICS 326199, 33271, 33272, 33281, 333511, 333514, 333999)	Totals	Company Management, Corporate Executives, Purchasing (B,L)	Manufacturing Production Management or Department (C,D,G,R,S)	Manufacturing Engineering Management or Department (E,F,T,V)	Quality Assurance, Quality Control (P,Q)	Product Design, Research & Development (H,I,J)	Educational or Government (N)	Sales & Marketing (X,Z)	Other NEC (A,U)
Aerospace/Aviation	19,284	10,406	4,996	2,348	606	397	16	424	91
Automotive/Transportation	19,758	10,685	5,086	2,483	509	458	15	429	93
Medical/Dental	14,797	7,674	3,966	1,926	446	338	14	361	72
Military/Defense	17,108	8,917	4,600	2,168	569	359	15	407	73
Offroad/Construction/Agriculture	19,699	11,016	4,953	2,277	543	401	14	404	91
Oil & Gas/Energy	16,341	8,696	4,423	1,936	473	326	15	394	78

3b. QUALIFICATION SOURCE BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF NOVEMBER 2018

Qualification Source	Qualified Within			Total Qualified	Percent
	1 Year	2 Years	3 Years		
I. Direct Request:	54,568	25,739	-	80,307	93.7
II. Request from recipient's company:	-	-	-	-	-
III. Membership Benefit:	-	-	-	-	-
IV. Communication from recipient or recipient's company (other than request):	-	-	-	-	-
V. TOTAL - Sources other than above (listed alphabetically):	5,436	-	-	5,436	6.3
Association rosters and directories	-	-	-	-	-
*Business directories	5,436	-	-	5,436	6.3
Manufacturer's, distributor's, and wholesaler's lists	-	-	-	-	-
Other sources	-	-	-	-	-
VI. Single Copy Sales:	-	-	-	-	-
TOTAL QUALIFIED CIRCULATION	60,004	25,739	-	85,743	100.0
PERCENT	70.0	30.0	-	100.0	

*See Additional Data

AVERAGE ANNUAL AUDITED QUALIFIED CIRCULATION AND CURRENT UNAUDITED BRAND REPORTS

6-Month Period Ended:	Audited Data		Audited Data		Circulation Claim	
	January – June 2016	July – December 2016	January – June 2017	July – December 2017	January – June 2018*	July – December 2018*
Total Audit Average Qualified:	96,675	98,571	98,294	97,891	96,328	93,498
Qualified Non-Paid:	96,675	98,571	98,294	97,891	96,328	93,498
Qualified Paid:	-	-	-	-	-	-
Post Expire Copies included in Total Qualified Circulation:	**NC	**NC	**NC	**NC	**NC	**NC
Average Annual Order Price:	**NC	**NC	**NC	**NC	**NC	**NC

***NOTE: January – December 2018 data is unaudited. With each successive period, new data will be added until six 6-month periods are displayed.**

**NC = None Claimed.

GEOGRAPHICAL BREAKOUT OF QUALIFIED CIRCULATION FOR ISSUE OF NOVEMBER 2018*

State	Total Qualified	Percent	State	Total Qualified	Percent
Maine	354		Kentucky	967	
New Hampshire	638		Tennessee	1,435	
Vermont	216		Alabama	893	
Massachusetts	1,895		Mississippi	347	
Rhode Island	284		EAST SO. CENTRAL	3,642	4.2
Connecticut	1,633		Arkansas	485	
NEW ENGLAND	5,020	5.9	Louisiana	649	
New York	3,298		Oklahoma	879	
New Jersey	1,482		Texas	4,425	
Pennsylvania	4,289		WEST SO. CENTRAL	6,438	7.5
MIDDLE ATLANTIC	9,069	10.6	Montana	208	
Ohio	6,381		Idaho	347	
Indiana	3,320		Wyoming	117	
Illinois	6,038		Colorado	823	
Michigan	6,199		New Mexico	276	
Wisconsin	3,914		Arizona	1,056	
EAST NO. CENTRAL	25,852	30.2	Utah	670	
Minnesota	2,587		Nevada	260	
Iowa	1,350		MOUNTAIN	3,757	4.4
Missouri	1,771		Alaska	86	
North Dakota	175		Washington	1,585	
South Dakota	349		Oregon	918	
Nebraska	569		California	7,486	
Kansas	1,008		Hawaii	67	
WEST NO. CENTRAL	7,809	9.1	PACIFIC	10,142	11.8
Delaware	116		UNITED STATES	80,762	94.2
Maryland	772		U.S. Territories	95	
Washington, DC	23		Canada	4,746	
Virginia	1,071		Mexico	140	
West Virginia	260		Other International	-	
North Carolina	1,823		APO/FPO	-	
South Carolina	1,032				
Georgia	1,371				
Florida	2,565				
SOUTH ATLANTIC	9,033	10.5			
			TOTAL QUALIFIED CIRCULATION	85,743	100.0

*See Additional Data

E-NEWSLETTER CHANNEL

2018	MMS Extra	The Shop - Blog
JULY		
July 6	-	59,600
July 11	59,569	-
July 13	-	59,502
July 20	-	57,422
July 25	58,574	-
July 27	-	58,627
AUGUST		
August 3	-	58,455
August 8	58,284	-
August 10	-	58,300
August 17	-	58,252
August 22	58,134	-
August 24	-	58,046
August 31	-	57,904
SEPTEMBER		
September 5	59,216	-
September 7	-	59,039
September 10	-	58,917
September 12	-	58,828
September 14	-	58,766
September 19	58,660	-
September 21	-	58,649
September 28	-	58,583
OCTOBER		
October 3	58,391	-
October 5	-	58,515
October 12	-	58,347
October 17	58,194	-
October 19	-	58,231
October 26	-	61,359
NOVEMBER		
November 2	-	59,133
November 7	61,256	-
November 9	-	60,972
November 16	-	58,081
November 21	58,735	-
November 23	-	57,872
November 30	-	57,719
DECEMBER		
December 5	58,270	-
December 7	-	60,183
December 14	-	60,763
December 19	60,957	-
December 21	-	60,316
December 28	-	60,231
AVERAGE:	59,020	58,950

MMS Extra (12 issued in the period)
 The Shop - Blog (28 issued in the period)

WEBSITE CHANNEL

WWW.MMSONLINE.COM

2018	Pageviews	Sessions	Users	Average Session Duration
July	238,184	163,065	126,120	1:16
August	281,973	195,619	150,680	1:13
September	296,969	204,297	161,567	1:12
October	287,920	198,089	158,184	1:16
November	274,985	190,976	150,075	1:21
December	253,655	172,779	138,302	1:19
AVERAGE:	272,281	187,470	147,488	1:16

July – December 2018 data was provided by Google Analytics. All website activity is audited by BPA Worldwide.

WEBSITE GLOSSARY

Pageviews: A Pageview is recorded each time a page implanted with the JavaScript code (tag) is displayed in a browser window. This will occur whether the page is served directly from the web server, from a proxy, or from the browser's cache.

Sessions: A single continuous set of activity attributable to a cookie browser resulting in one or more pulled text and/or graphics downloads from a site. A period of 30 minutes of inactivity will terminate the session.

Users: An identified and unduplicated Cookied Browser that accesses Internet content or advertising during a measurement period.

Average Session Duration: The time visitors remain on a site per session.

SOCIAL MEDIA CHANNEL

Modern Machine Shop Social Media



Twitter followers

<http://twitter.com/mmsonline>



Facebook likes

<http://www.facebook.com/mmsonline>



LinkedIn group members

<http://www.linkedin.com/grp/home?gid=4074615>



YouTube views*

<https://www.youtube.com/user/mmsonlinevideos>

2018

Beginning Balance:	9,851	9,859	1,959	288,328
July	9,997	10,000	1,955	298,094
August	10,100	10,418	1,954	8,000
September	10,200	10,000	1,949	10,100
October	10,400	10,771	1,948	329,365
November	10,500	11,000	1,948	344,607
December	10,600	11,229	1,948	353,663

*Note 1: YouTube data is cumulative views for all videos on the channel.

ADDITIONAL DATA

MAGAZINE:

PARAGRAPH 3b:

Business directories include 1 source of circulation for a quantity of 5,436 copies or 6.3%.

GEOGRAPHIC DISTRIBUTION:

Geographic data for E-Newsletters, Website and Social Media are not reported at the media owner's option.

PUBLISHER'S AFFIDAVIT

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

Bryce Ellis, Publisher

Julie Ball, Audience Development Manager

(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.

Date signed

State

County

Received by BPA Worldwide

Type

ID Number

January 25, 2019

Ohio

Hamilton

January 25, 2019

BD

M102B0D8

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.