

C3
CATALOGUE No.

42-214

ANNUAL



CANADA

DOMINION BUREAU
OF STATISTICS

JUN 16 1965

PROPERTY OF THE
LIBRARY

MISCELLANEOUS MACHINERY AND EQUIPMENT MANUFACTURERS

1962

ANNUAL CENSUS
OF MANUFACTURES

Published by Authority of
The Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Industry Division

June 1965
6521-819

Price: 50 cents



SYMBOLS

The following standard symbols are used in Dominion Bureau of Statistics publications:

- .. figures not available.
- ... figures not appropriate or not applicable.
- nil or zero.
- amount too small to be expressed.
- ▷ preliminary figures.
- ⋈ revised figures.

MISCELLANEOUS MACHINERY AND EQUIPMENT MANUFACTURERS

1962

Data presented in this report under the heading of Miscellaneous Machinery and Equipment Manufacturers reflect implementation of the revised Standard Industrial Classification (S.I.C.) and the New Establishment Concept which are being used by the Dominion Bureau of Statistics in its compilation of industry statistics — see items "Standard Industrial Classification" and "Establishment" in the Explanatory Notes section of this report.

For statistical purposes the industry titled Miscellaneous Machinery and Equipment Manufacturers covers the operations of establishments primarily engaged in manufacturing machinery and equipment designed particularly for use in construction and mining operations including earth moving machinery and equipment, and earth and rock boring and drilling equipment; establishments primarily engaged in manufacturing other special-industry machinery except agricultural machinery, including such products as textile machinery, pulp and paper machinery, printing machinery, and food-processing machinery; establishments primarily engaged in manufacturing machinery and equipment not designed for use in any particular industry or classified elsewhere, including such products as marine engines, general-purpose engines, pumping equipment, equipment for the transmission of mechanical power, conveyor systems, elevators and lifting and hoisting machinery. Establishments primarily engaged in manufacturing industrial tractors for handling materials in industrial plants, depots and docks are included here. Included also are establishments primarily engaged in manufacturing woodworking machinery and in manufacturing machine tools which are on metal. Establishments primarily engaged in manufacturing bits, drills and other cutting tools for machines or for power-driven hand tools are included in Industry No. 306 — Hardware, Tool and Cutlery Manufacturers.

The introduction of the final stage of the establishment concept in the Annual Census of Manufactures has resulted in certain changes and necessitated some adjustments to the statistics. Refer to the Explanatory Notes section of this report for a more detailed explanation. A comparison of Tables 1 and 1A will indicate the extent of the changes and these were, in the main, the result of adjustments to individual reports rather than changes due to implementation of the establishment concept. Note 6 of Table 8 explains one of the major changes.

TABLE 1. Principal Statistics — Manufacturing Activity,¹ 1957-61
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year	Estab- lish- ments	Employees						Cost of fuel and elec- tricity ⁴	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴
		Production and related workers ⁴		Administrative and office employees ³		Total ⁴					
		Number	Wages	Number	Salaries	Number	Salaries and wages				
	No.		\$'000		\$'000		\$'000				
1957	371	21,059	79,759	9,782	43,223	30,841	122,982	3,909	171,594	398,212	..
1958	397	16,847	64,431	9,201	43,120	26,048	107,551	3,889	152,723	343,269	178,040
1959	393	17,966	72,866	9,364	45,819	27,330	118,685	4,221	164,838	371,266	209,390
1960	396	18,088	74,470	9,468	49,024	27,556	123,494	4,324	172,826	389,381	215,300
1961	420	20,599	74,557	9,011	48,190	26,610	122,746	4,432	178,604	390,689	208,483

See footnotes following Table 3 A.

TABLE 1 A. Principal Statistics — Manufacturing Activity and Total Activity,¹ 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year and province	Estab- lish- ments	Manufacturing activity							Total activity					
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸	
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages		
	No.		'000			\$'000				\$'000			\$'000	
1961														
Newfoundland	1	}	66	153	266	11	230	716	461	11	11	84	360	523
New Brunswick	2													
Nova Scotia	5		240	499	852	70	474	2,121	1,715	—	—	268	968	1,753
Quebec	70		4,509	9,733	17,946	1,086	46,275	98,173	61,512	10	74	7,926	35,102	69,848
Ontario	265		11,273	23,817	48,548	2,887	117,642	274,357	153,681	31	200	19,558	95,289	166,023
Manitoba	13		303	669	1,216	72	2,387	5,858	3,512	11	11	537	2,425	4,023
Saskatchewan	6		73	143	280	16	363	1,052	570	11	11	93	377	622
Alberta	12		196	424	897	91	2,870	4,675	1,787	—	—	329	1,568	1,993
British Columbia	45		1,112	2,169	5,173	262	7,549	20,488	12,416	5	25	1,602	7,918	13,172
Totals	419		17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962														
Newfoundland	1	}	96	209	322	12	371	936	624	11	11	123	480	629
New Brunswick	2													
Nova Scotia	6		236	508	875	78	472	2,046	1,228	11	11	261	996	1,293
Quebec	75		5,211	11,589	22,050	1,110	59,961	115,730	58,616	8	56	8,747	40,542	68,544
Ontario	274		12,755	27,072	57,534	3,010	146,733	328,881	189,100	27	181	21,734	107,927	204,747
Manitoba	15		300	689	1,213	81	2,393	5,911	3,403	11	11	521	2,414	4,296
Saskatchewan	6		74	150	293	20	364	928	546	11	11	95	389	628
Alberta	15		279	603	1,240	117	4,226	7,143	3,030	11	11	486	2,273	3,604
British Columbia	49		1,253	2,553	5,969	296	10,522	24,768	14,283	11	11	1,860	9,250	15,960
Totals	443		20,204	43,354	89,496	4,723	225,043	488,142	270,829	43	273	33,827	164,272	298,811

See Table 2 and footnotes following Table 3 A.

TABLE 1 B. Principal Statistics classified by Size Groups based on Shipments of Goods of Own Manufacture, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000			\$'000
1961													
Under \$10,000	6	7	12	23	2	15	36	13	4	4	11	42	22
\$ 10,000 to \$ 24,999	20	32	57	97	9	124	371	217	11	32	46	144	234
25,000 " 49,999	27	108	179	335	21	363	1,034	691	12	48	148	490	701
50,000 " 99,999	51	306	542	1,017	61	1,277	3,717	2,284	12	67	414	1,442	2,530
100,000 " 199,999	77	688	1,405	2,514	174	4,490	11,550	7,044	4	29	1,036	4,152	7,598
200,000 " 499,999	76	1,315	2,719	5,109	303	10,273	23,961	13,256	2	23	2,028	8,589	14,351
500,000 " 999,999	55	1,910	4,160	8,285	441	17,089	39,380	22,545	—	—	3,150	14,988	25,730
1,000,000 " 4,999,999	96	8,555	18,151	35,823	1,922	88,062	197,659	106,147	4	108	14,061	66,266	120,083
5,000,000 and over	11	4,851	10,383	21,973	1,563	56,100	129,731	83,436	—	—	8,996	44,893	85,412
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	507	3,000	1,297
Totals	419	17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962													
Under \$10,000	6	2	3	5	1	15	39	37	5	12	3	8	40
\$ 10,000 to \$ 24,999	14	23	47	81	9	83	249	188	5	20	39	128	198
25,000 " 49,999	32	86	166	291	23	407	1,166	750	11	59	122	416	793
50,000 " 99,999	55	284	594	1,073	87	1,679	4,215	2,514	14	67	407	1,660	2,906
100,000 " 199,999	69	608	1,285	2,360	170	3,822	9,812	5,882	4	30	857	3,620	6,453
200,000 " 499,999	88	1,390	2,933	5,533	316	13,691	28,547	14,955	—	—	2,101	9,347	16,531
500,000 " 999,999	61	2,127	4,587	8,986	431	20,637	44,640	23,904	—	—	3,417	16,027	27,884
1,000,000 " 4,999,999	103	9,392	20,260	41,458	1,916	105,556	223,094	124,200	4	85	15,296	73,202	139,555
5,000,000 and over	15	6,292	13,479	29,708	1,770	79,154	174,379	98,400	—	—	11,059	58,785	102,177
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	526	3,077	2,474
Totals	443	20,204	43,354	89,496	4,723	225,043	486,142	270,829	43	273	33,827	164,272	298,811

See footnotes following Table 3 A.

TABLE 1 C. Principal Statistics classified by Size Groups based on Manufacturing Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000			\$'000
1961													
Under \$10,000	14	22	41	80	8	97	285	46	9	17	35	140	63
\$ 10,000 to \$ 24,999	31	79	129	233	19	430	1,004	535	16	64	109	337	653
25,000 " 49,999	55	276	495	910	61	2,245	4,470	2,165	11	59	398	1,409	2,366
50,000 " 99,999	63	507	965	1,794	129	3,360	8,153	4,687	7	51	738	2,887	5,018
100,000 " 199,999	70	1,091	2,219	4,055	246	7,733	18,027	9,899	2	11	1,558	6,476	10,848
200,000 " 499,999	83	2,539	5,505	10,620	648	31,485	60,413	27,148	—	—	4,177	19,252	30,538
500,000 " 999,999	52	3,052	6,432	12,552	704	34,912	72,894	37,138	4	108	4,857	22,389	41,162
1,000,000 " 4,999,999	46	7,328	15,637	31,441	1,916	61,838	155,008	92,945	—	—	12,484	59,288	105,094
5,000,000 and over	5	2,878	6,184	13,492	764	35,691	87,183	61,072	—	—	5,534	28,828	60,917
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	507	3,000	1,297
Totals	419	17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962													
Under \$10,000	10	22	42	82	12	393	659	60	7	20	58	277	240
\$ 10,000 to \$ 24,999	34	67	135	239	29	500	1,064	588	9	36	115	414	846
25,000 " 49,999	54	228	473	847	68	2,285	4,326	2,053	18	92	339	1,364	2,421
50,000 " 99,999	73	566	1,190	2,155	160	4,313	9,742	5,481	5	39	845	3,415	6,087
100,000 " 199,999	73	1,007	2,127	3,978	248	10,504	21,179	10,657	—	—	1,543	6,783	11,642
200,000 " 499,999	75	2,260	4,757	9,417	476	25,333	49,737	23,883	—	—	3,512	16,510	26,968
500,000 " 999,999	84	3,693	7,911	15,892	802	48,365	91,912	45,325	4	85	5,716	26,987	50,406
1,000,000 " 4,999,999	53	7,767	16,809	34,615	1,526	83,283	188,951	111,299	—	—	13,329	64,311	125,086
5,000,000 and over	7	4,594	9,910	22,271	1,402	50,066	118,572	71,484	—	—	7,844	41,136	72,660
Head offices, sales offices and auxiliary units ¹⁰	...	...	...	...	...	...	...	...	...	...	528	3,077	2,474
Totals	443	20,204	43,354	89,496	4,723	225,043	486,142	270,829	43	273	33,827	164,272	298,811

See footnotes following Table 3 A.

TABLE 1 D. Principal Statistics classified by Size Groups based on Total Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under \$10,000	13	18	31	61	6	89	276	44	9	17	28	103	52
\$ 10,000 to \$ 24,999	29	68	117	220	17	375	866	479	14	54	96	325	508
25,000 " 49,999	48	207	371	686	39	1,609	3,422	1,810	11	59	303	1,063	1,859
50,000 " 99,999	68	553	1,029	1,904	143	3,869	8,693	4,673	7	39	789	3,011	5,008
100,000 " 199,999	70	1,008	2,034	3,700	228	7,056	16,829	9,490	4	34	1,427	5,875	10,260
200,000 " 499,999	74	2,141	4,629	8,823	522	25,154	49,440	22,259	—	—	3,441	15,499	23,350
500,000 " 999,999	60	3,187	6,903	13,628	778	35,200	73,544	37,636	4	108	5,069	23,996	42,535
1,000,000 " 4,999,999	49	6,949	14,531	29,734	1,777	60,073	149,185	88,434	—	—	11,743	56,316	96,110
5,000,000 and over	8	3,641	7,963	16,420	986	44,365	105,180	70,811	—	—	6,994	34,819	76,981
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	507	3,000	1,297
Totals	419	17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962													
Under \$10,000	9	8	13	27	5	107	171	59	7	20	10	34	58
\$ 10,000 to \$ 24,999	31	58	115	195	18	330	834	528	9	36	95	307	553
25,000 " 49,999	46	187	387	674	56	1,359	3,063	1,664	18	92	250	950	1,706
50,000 " 99,999	74	542	1,146	2,147	155	4,690	9,966	5,280	5	39	798	3,372	5,530
100,000 " 199,999	77	1,030	2,177	4,009	248	10,110	20,804	10,484	—	—	1,546	6,714	11,440
200,000 " 499,999	73	2,013	4,296	8,335	430	23,796	44,012	19,970	—	—	3,138	14,390	21,929
500,000 " 999,999	63	3,479	7,388	14,877	783	41,477	82,449	42,194	4	85	5,342	25,513	46,253
1,000,000 " 4,999,999	61	7,749	16,770	34,723	1,499	88,949	196,721	114,015	—	—	13,165	63,930	124,925
5,000,000 and over	9	5,138	11,061	24,506	1,528	54,225	128,122	76,634	—	—	8,957	45,984	83,944
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	526	3,077	2,474
Totals	443	20,204	43,354	89,496	4,723	225,043	486,142	270,829	43	273	33,827	164,272	298,811

See footnotes following Table 3 A.

TABLE 1 E. Principal Statistics classified by Size Groups based on Total Employed,^{1,2} 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Size group	Estab- lish- ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec- tricity ⁵	Cost of materials and supplies used ⁴	Value of shipments of goods of own manu- facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁸
		Number	Man- hours paid	Wages					Number	With- drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Under 5 employees	46	70	128	231	25	924	1,875	917	25	63	101	366	932
5- 14 employees	110	603	1,187	2,259	162	5,809	12,896	7,194	15	98	925	3,838	7,650
15- 49 "	130	2,363	4,884	9,045	569	24,714	53,796	28,172	5	22	3,552	15,500	29,815
50- 99 "	62	2,739	5,858	11,491	623	32,643	64,983	32,186	4	108	4,471	20,745	36,728
100-199 "	35	2,980	6,275	12,466	748	29,859	66,750	35,567	—	—	4,927	23,043	38,641
200-499 "	28	4,890	10,385	20,718	965	40,534	101,903	59,947	—	—	8,009	37,637	69,505
500 employees and over	8	4,127	8,890	18,967	1,377	43,310	105,233	71,651	—	—	7,905	39,880	73,369
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	507	3,000	1,297
Totals	419	17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962													
Under 5 employees	56	94	201	361	42	1,479	2,918	1,476	21	81	147	587	1,559
5- 14 employees	117	661	1,434	2,646	224	6,840	15,517	8,624	18	107	1,005	4,386	9,800
15- 49 "	129	2,350	4,962	9,422	561	31,202	60,092	29,692	—	—	3,652	16,740	31,846
50- 99 "	60	2,738	5,965	11,686	572	36,029	69,957	36,447	4	85	4,340	20,474	41,580
100-199 "	40	3,547	7,569	15,752	762	39,513	78,234	39,065	—	—	5,546	26,942	42,298
200-499 "	33	5,998	12,911	26,440	1,129	56,967	134,822	81,231	—	—	9,778	46,179	91,889
500 employees and over	8	4,816	10,312	23,189	1,432	53,012	124,601	74,293	—	—	8,833	45,887	77,365
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	526	3,077	2,474
Totals	443	20,204	43,354	89,496	4,723	225,043	486,142	270,829	43	273	33,827	164,272	298,811

See footnotes following Table 3 A.

TABLE 1 F. Principal Statistics classified by Type of Organization, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Type of organization	Estab-lish-ments	Manufacturing activity							Total activity				
		Production and related workers ⁴			Cost of fuel and elec-tricity ⁵	Cost of materials and supplies used ⁶	Value of shipments of goods of own manu-facture ⁴	Value added ⁴	Working owners and partners ⁶		Total employees ⁷		Total value added ⁴
		Number	Man-hours paid	Wages					Number	With-drawals	Number	Salaries and wages	
	No.		'000			\$'000				\$'000		\$'000	
1961													
Individual ownerships	24	92	168	300	17	378	1,124	711	24	110	102	324	717
Partnerships	12	91	179	320	14	841	1,903	1,050	25	200	118	443	1,197
Incorporated companies	383	17,589	37,261	74,557	4,464	176,572	404,411	233,873	—	—	29,670	140,241	254,746
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	507	3,000	1,297
Totals	419	17,772	37,608	75,177	4,496	177,791	407,438	235,634	49	311	30,397	144,007	257,957
1962													
Individual ownerships	27	108	227	400	28	574	1,453	862	27	143	115	418	866
Partnerships	7	66	165	271	13	645	1,465	800	16	130	76	345	801
Incorporated companies	409	20,030	42,963	88,825	4,681	223,823	483,223	269,166	—	—	33,110	160,431	294,669
Cooperatives	—	—	—	—	—	—	—	—	—	—	—	—	—
Head offices, sales offices and auxiliary units ¹⁰ .....	...	...	...	...	...	...	...	...	...	...	526	3,077	2,474
Totals	443	20,204	43,354	89,496	4,723	225,043	486,142	270,829	43	273	33,827	164,272	298,811

See footnotes following Table 3 A.

TABLE 2. Industry Outputs, Inputs and Value Added, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Item	1961	1962
	\$'000	
Manufacturing activity:		
Value of shipments—Goods of own manufacture	407,438	486,142
Add: Closing inventory—Goods in process	51,200	44,949
Finished goods	40,672	44,665
Deduct: Opening inventory—Goods in process	40,169	36,362
Finished goods	41,220	(81,389)
Gross output—Manufacturing activity	417,921	500,595
Deduct: Cost of materials and supplies used in manufacturing activity	177,791	225,043
Cost of fuel and electricity used	4,496	(182,287)
Value added—Manufacturing activity	235,634	270,829
Non-manufacturing activities:		
Value of shipments—Goods not of own manufacture .....	..	93,951
Add: All other revenue .....	..	7,671
Closing inventory—Goods purchased for resale	13,323	12,926
Deduct: Purchases of goods for resale as such .....	..	70,442
Opening inventory—Goods not of own manufacture	13,419	13,124
Cost of all other materials and supplies used .....	..	(..)
Value added—Non-manufacturing activities	22,323	27,983
Total value added	257,957	298,811

See footnote following Table 3 A.

TABLE 3. Employment and Payroll, 1961 and 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Year and province	Employees										Salaries and wages					
	Production and related workers				Adminis- trative and office ³		Sales, and distribution ³		Total employees ^{3,4}		Production and related workers		Admin- istrative and office	Sales, and distri- bution	Total salaries and wages	
	Manufacturing ⁴		Other ⁵													
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Manufac- turing	Other				
	number										\$'000					
1961																
Newfoundland.....	}	66	—	..	..	..	..	..	80	4	266	..	..	..	360
New Brunswick.....		240	—	..	..	..	..	..	261	7	652	..	..	..	968
Nova Scotia.....		4,447	62	..	..	..	..	..	7,093	833	17,946	..	..	..	35,102
Quebec.....	10,665	608	..	..	..	..	..	..	17,137	2,421	48,548	..	..	..	95,288
Manitoba.....		290	13	..	..	..	..	..	474	63	1,216	..	..	..	2,425
Saskatchewan.....		73	—	..	..	..	..	..	66	7	280	..	..	..	377
Alberta.....		185	11	..	..	..	..	..	285	44	896	..	..	..	1,566
British Columbia.....		1,087	25	..	..	..	..	..	1,469	133	5,173	..	..	..	7,918
Totals.....		17,053	719	..	..	..	..	..	26,885	3,512	75,177	..	..	..	144,007
1962																
Newfoundland.....	}	96	—	—	—	20	6	1	—	117	6	322	—	155	4	480
New Brunswick.....		236	—	—	—	21	4	—	—	257	4	875	—	121	—	996
Nova Scotia.....		5,136	75	58	13	2,015	681	650	119	7,859	888	22,050	269	13,870	4,353	40,542
Quebec.....	12,074	681	1,131	9	4,197	1,539	1,721	382	19,123	2,611	57,534	7,046	31,180	12,167	107,927	
Ontario.....		290	10	1	—	127	32	51	10	469	52	1,213	1	858	342	2,414
Manitoba.....		74	—	—	—	14	7	—	—	88	7	293	—	96	—	389
Saskatchewan.....		270	9	—	—	77	35	90	5	437	49	1,240	—	603	430	2,273
Alberta.....		1,222	31	—	—	352	128	114	13	1,688	172	5,969	—	2,500	780	9,250
British Columbia.....																
Totals.....		19,398	806	1,190	22	6,823	2,432	2,627	529	30,038	3,789	89,496	7,316	49,383	18,077	164,272

See footnotes following Table 3 A.

TABLE 3 A. Production and Related Workers,⁴— Manufacturing Activity, by Months, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept²

Month	Establishments reporting monthly detail	
	Male	Female
	number	
January.....	16,374	727
February.....	16,744	739
March.....	17,289	733
April.....	17,662	740
May.....	18,300	736
June.....	17,868	721
July.....	17,689	731
August.....	18,796	750
September.....	18,916	787
October.....	19,130	793
November.....	19,213	783
December.....	18,848	753
Average for establishments reporting monthly detail (collected only for large establishments).....	17,741	753
Average for small establishments (only annual averages collected).....	1,657	53
Average for all establishments.....	19,398	806

¹ See Table 2 and Explanatory Notes concerning manufacturing and non-manufacturing activities.

² See Explanatory Notes.

³ This category, in this table only, includes working owners and partners. Since administrative and office employees are engaged in a variety of activities they have been excluded from manufacturing activity beginning with the revised 1961 series shown in the following tables. They are included here for purposes of comparison with the tabulations of previous years.

⁴ Conceptually identical to previous years. See Explanatory Notes.

⁵ Cannot be reported separately for manufacturing and non-manufacturing activities but related substantially to manufacturing activity. Identical concept to previous years.

⁶ Working owners and partners were included with administrative and office employees in the "Manufacturing series" published in former years. See Explanatory Notes.

⁷ Includes production and related workers, administrative and office employees, sales distribution and other employees. See Explanatory Notes for the treatment of head office employees and those employed in auxiliary units.

⁸ Value of total shipments and other operational revenue less total cost of materials, supplies, fuels used and purchases of products and materials for resale in the same condition; all adjusted for inventory changes where required. See Table 2 and Explanatory Notes.

⁹ Sales and distribution workers and production workers (non-manufacturing) are included for the first time as a result of the full implementation of the new definition of the establishment. The figures for production workers (non-manufacturing), administrative and office employees and sales and distribution workers are not yet available for 1961 but form part of total employees. Sales and distribution workers may include some employees that are reported as part of a manufacturing establishment but are not working at the establishment's location. Head offices, sales offices, etc., which report separately are included in the figures for the province in which they are located.

¹⁰ These data cover the activities reported by separately located units such as head offices, sales offices, administrative offices, laboratories, warehouses, etc. Such units do not usually constitute separate "establishments" as they do not normally generate all the necessary elements of input and output statistics. However, they are treated as extensions of manufacturing establishments and, in the case of individual industries, may be located in provinces where no processing plants are situated. For the most part, these units contribute only to costs of operations (mainly salaries and wages) and they are included here to provide completeness and consistency of the statistics. See Explanatory Notes which deal with Single and Multi establishments for a complete explanation of procedures.

¹¹ Confidential data.

¹² Includes paid employees and working owners but excludes unpaid family workers.

Note: Figures may not add due to rounding.

TABLE 4. Materials and Supplies Used in Manufacturing Activity, 1962
Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description	Quantity	Cost \$'000
1. Materials used:		
Castings (rough and semi-finished) received from foundry:		
Iron (gray and malleable)	ton 22,866	7,418
Steel	" 10,342	8,057
Pig iron, all grades	" 8,950	617
Steel (except alloy steel):		
Bars	" 26,849	5,543
Plates (3/16 in. and thicker)	" 51,896	7,972
Sheets (under 3/16 in.):		
Plain	" 25,167	4,020
Galvanized	" 2,306	448
Tinplate	" 358	55
Strips (less than 14 in. wide)	" 4,215	894
Structural shapes, unfabricated (channels, angles, etc.)	" 28,100	6,474
Wire	" 2,531	398
Alloy steel in all forms:		
Alloy steel (other than stainless and tool steel) .....	..	3,497
Stainless .....	..	3,289
Tool steel (all types including high speed) .....	..	501
Scrap iron and steel:		
Purchased	ton 20,896	884
Own make	" 6,625	...
Pipe and fittings, iron and steel .....	..	4,219
Other iron and steel .....	..	5,898
Ferro-alloys .....	..	343
Non-ferrous metals in all forms:		
Aluminum:		
Castings	pound 5,022,488	5,918
Sheet	" 714,673	398
Other forms	" 614,176	305
Brass and bronze	" 5,666,814	2,749
Copper:		
Sheet	" 299,570	180
Wire	" 345,463	255
Other forms	" 585,151	309
Lead	" 228,272	45
Nickel	" 264,342	229
Tin	" 9,903	13
Zinc	" 2,020,780	322
Babbitt metals and solders	" 276,239	177
Other non-ferrous metals .....	..	1,100
Other materials and supplies:		
Paints, oils and varnishes .....	..	794
Foundry coke (used in cupola)	ton 7,529	282
Foundry sands	" 27,541	364
Plumbago and graphite	pound 309,923	23
Lumber	M ft. b.m. 6,545	683
Firebrick and cupola blocks .....	..	82
Fireclay	ton 646	22
Core oil	Imp. gal. 283,110	105
All other materials and components used ² .....	...	138,502
2. Containers and other packaging materials and supplies used		2,582
3. Operating, maintenance and repair supplies used (excluding fuel)		8,352
4. Amount paid out to others for work done on materials owned by establishments		2,924
Total		225,043

¹ See Explanatory Notes.

² No detailed information on materials used was collected from small establishments, the estimated costs for which are included here. In 1962 these estimated costs were \$11,203,210.

TABLE 5. Fuel and Electricity Used¹ in Manufacturing Activity,² 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept³

Description	Quantity	Cost
		\$'000
1. Large establishments which reported commodity detail:		
Bituminous coal:		
(a) From Canadian mines.....	ton 7,149	93
(b) Imported	" 23,382	287
Sub-bituminous coal (from Alberta mines only)	" 279	3
Anthracite coal	" 717	10
Lignite coal	" -	-
Coke	ton 1,018	25
Gasoline (including gasoline used in cars and trucks).....	Imp. gal. 863,162	330
Fuel oil including kerosene or coal oil.....	" 7,891,868	845
Wood	cord 18	--
Gas:		
(a) Liquefied petroleum gases	Imp. gal. 108,368	26
(b) Other manufactured gas	M cu.ft. 32,422	13
(c) Natural gas	" 950,139	560
Other fuel	" --	--
Electricity purchased	kwh. 180,082,458	2,084
Steam purchased	" --	71
2. Estimate for small establishments for which no data were collected:		
Fuel and electricity .....	...	375
3. All establishments:		
Total fuel and electricity used .....	...	4,723

¹ Does not include fuel and electricity produced for own use.

² Includes only fuel and electricity purchased. Conceptually identical to previous years in that it also includes relatively small amounts used in non-manufacturing activities since these cannot be reported separately.

³ See Explanatory Notes.

TABLE 6. Shipments of Goods of Own Manufacture, 1962

Basis: Revised Standard Industrial Classification and New Establishment Concept¹

Description	Value
	\$'000
1. Products:	
Compressors, pumps and parts:	
Air compressors.....	8,836
Pumps and parts	19,251
Conveying, elevating, materials handling equipment and parts:	
Conveyors and conveying systems and parts	22,945
Elevators and parts.....	34,819
Hoisting machinery (except mine hoists) and parts	9,891
Industrial trucks, tractors, trailers and stackers and parts	3,238
Miscellaneous materials handling equipment and parts.....	5,456
Drilling, excavating, mining and related machinery and parts:	
Rock drilling, earth boring and related machinery and parts	21,958
Excavating, dredging and loading equipment and parts.....	14,084
Mining and ore processing machinery and parts	14,348
Construction machinery and parts.....	11,324
Engines and parts	34,091
Fire-fighting equipment	3,379
Food products machinery (including beverages and tobacco) machinery and parts:	
Bakers' machinery and parts	2,308
Dairy and milk products plant machinery	460
Flour and grist mill machinery	626
Food products machinery, other, and parts	1,731
Foundry equipment (core-making machines, moulding machines, casting machines, shakeout equipment, etc.)	802
Metal-working machinery and parts:	
Machine tools, metal-working and parts.....	7,584
Metal-working machinery (except machine tools) and parts	6,759
Miscellaneous general purpose industrial machinery and parts:	
Wrapping and packaging machinery and parts	2,500
Other general purpose industrial machinery and parts.....	5,330

¹ See Explanatory Notes.

TABLE 6. Shipments of Goods of Own Manufacture, 1962 - Concluded

Description	Value
	\$'000
i. Products - Concluded:	
Miscellaneous special industry machinery and parts:	
Cement mill machinery.....	852
Grain elevator machinery.....	1,205
Logging machinery.....	5,136
Rubber-working machinery.....	2,837
Saw-mill machinery, including lumber handling equipment.....	3,230
Special industry machinery, other, and parts.....	15,327
Pulp and paper industries machinery and parts.....	24,020
Refrigeration and air conditioning equipment and parts:	
Refrigeration equipment and parts.....	1,147
Air conditioning equipment and parts.....	2,267
Service industry equipment (including vending machines) and parts.....	9,101
Ship's machinery and fittings.....	1,269
Textile industries machinery and parts.....	180
Transmission equipment and bearings and parts.....	32,441
Water and sewage treatment equipment and parts.....	5,544
Woodworking machinery (excluding power driven hand tools) and parts.....	2,493
Ventilating, exhaust and dust-collecting equipment and parts.....	12,942
All other machinery and machinery parts.....	39,597
Total machinery and parts.....	391,309
All other products.....	69,107
2. Amount received in payment for work done on materials and products owned by others.....	11,768
Less adjustment for value of sales taxes, excise duties and outward transportation charges which could not be deducted from individual commodity items described above.....	(2,054)
Net adjustment for establishments receiving progress payments ²	16,012
Total adjusted value of shipments and work done.....	486,142

² See footnote 1, Table 7.

TABLE 7. Industry Inventories, 1962¹

Basis: Revised Standard Industrial Classification and New Establishment Concept²

Province	Manufacturing				Non-manufacturing	Total inventories ³
	Raw materials and supplies	Goods in process	Finished goods of own manufacture	Total manufacturing	Products or materials purchased for resale	
book value \$'000						
Opening: ³						
Newfoundland	74	24	34	132	—	132
New Brunswick						
Nova Scotia	171	387	237	795	—	795
Quebec	7,245	12,123	9,442	28,810	2,516	31,326
Ontario	30,355	22,550	26,893	79,798	8,972	88,770
Manitoba	775	226	872	1,673	426	2,099
Saskatchewan	486	16	24	506	—	506
Alberta	684	121	612	1,417	577	1,994
British Columbia	2,405	915	2,271	5,591	633	6,224
Totals ⁴	42,174	36,362	40,185	118,722	13,124	131,846
Closing:						
Newfoundland	81	91	38	210	—	210
New Brunswick						
Nova Scotia	179	171	184	534	—	534
Quebec	8,083	15,772	9,751	33,606	2,184	35,790
Ontario	34,813	27,293	31,864	93,970	9,329	103,299
Manitoba	741	299	566	1,606	390	1,996
Saskatchewan	446	19	23	488	—	488
Alberta	1,048	116	847	2,011	448	2,459
British Columbia	2,470	1,189	2,330	5,989	575	6,564
Totals ⁴	47,862	44,949	45,603	138,414	12,926	151,340

¹ Values represent book values of inventories owned in Canada. Inventories held for which progress payments have been received are not included. Where progress payment accounts are maintained the change in these accounts is treated as a net adjustment to shipments.

² See Explanatory Notes.

³ The opening inventories may differ from the closing inventories for the previous survey year because of changes in classification, the receipt of revised data, the inclusion of new establishments and the removal of establishments which did not operate during the survey year.

⁴ Figures may not add due to rounding.

⁵ The difference between figures in this table and those in Table 2 arises from firms reporting output of products on the basis of production rather than of shipments. Consequently, inventories of finished products for such respondents are not taken into account for purposes of compiling value added in Table 2.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961¹ and 1962¹

Description	1961		1962	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
Compressors and pumps:				
Air compressors:				
Stationary type .....	..	4,807	..	7,231
Portable type .....	..	918	..	1,694
Pumps:				
Centrifugal .....	..	11,178	..	11,004
Deep well	1,831	348	2,888	375
Sump	29,420	933	33,693	1,144
Hand pumps .....	..	349	..	587
Self-contained household water pumping systems:				
Deep well and shallow jets	43,794	3,890	42,953	3,657
Shallow well, non-jet	21,526	1,853	20,496	1,816
Other power pumps; including direct-acting steam piston, electric, rotary, vacuum, and pump jacks .....	..	3,729	..	4,799
Pumps parts and accessories .....	...	4,571	...	4,340
Conveying, elevating and materials handling equipment:				
Conveyors and conveying systems:				
Gravity conveyors, (including straight and spiral chutes) .....	..	1,266	..	2,653
Portable conveyor units .....	..	1,019	..	857
Power conveyors:				
Belt type .....	..	9,623	..	13,332
Bucket type .....	..	1,219	..	1,182
Other conveyors, including pneumatic tube systems and parts .....	..	6,279	..	5,488
Elevators, including passenger, freight, sidewalk, dumb-waiters, escalators and parts ..	...	40,890 ⁶	...	35,652 ⁶
Hoisting machinery (except mine hoists):				
Powered overhead travelling cranes .....	..	5,170	..	9,707
Other cranes .....	..	1,502	..	3,811
Chain blocks and trolleys .....	..	1,298	..	1,731
Monorail electric hoists .....	..	846	..	1,212
Monorail systems .....	..	772	..	497
Industrial hoists and lifts, stationary .....	..	458	..	769
Winches .....	..	1,251	..	1,078
Other hoisting machinery .....	..	1,941	..	879
Attachments and parts for hoisting machinery .....	..	1,026	..	1,441
Industrial trucks, tractors, trailers and stackers:				
Hand trucks (including dollies) .....	..	1,821	..	1,763
Lift trucks .....	..	1,059	..	2,317
Other industrial tractors, stackers, including powered types .....	..	697	..	577
Miscellaneous materials handling equipment .....	...	3,432	...	6,179
Drilling, excavating, mining and related machinery:				
Rock drilling, earth boring and related machinery:				
Rock drills, including diamond drills .....	..	2,185	..	1,735
Diamond drill bits .....	..	4,407	..	5,349
Tungsten carbide drill bits .....	..	4,551	..	4,294
Other rock drilling, earth boring and related machinery and parts .....	..	7,747	..	11,882
Mining and ore processing machinery:				
Ball and rod mills .....	..	1,273	..	1,659
Crushers, jaw and gyratory .....	..	1,410	..	2,161
Hoist (mine hoists only)	1	1	1	1
Mine cars	2	1	2	991
Skips and cages	2	2	2	2
All other mining and ore processing machinery, including agitators, coal cutting machines, filters, flotation machines, screens, thickeners, etc. and parts .....	...	6,470	...	13,683
Construction, excavating, dredging and loading equipment:				
Power excavators (power shovels)	113	4,381	138	5,997
Bulldozing, angle-doing and similar equipment .....	..	1,072	..	1,214
Snow ploughs .....	..	2,118	..	1,960
Concrete mixer-agitators, truck type	203	1,089	321	2,237
Concrete, plaster and mortar mixers, other	3,472	797	2,820	841
Other mixing and paving equipment (concrete and bituminous) .....	..	1,765	..	1,888
Other construction machinery, including pneumatic hammers, demountable scaffolding etc. and parts .....	...	5,444	...	3,320
Other excavating machinery and parts .....	...	5,495	...	4,171
Other road and airport construction and maintenance machinery, including snow blowers, flushers, scrapers, etc. and parts .....	...	7,725	...	10,194
Engines (excluding aircraft and automobile types):				
Turbines, hydraulic and steam .....	..	11,624	..	18,609
Diesel, gas turbine and steam .....	..	3,275	..	8,116
Gasoline, including outboard, industrial, etc.	68,690	17,660	..	17,471
Engine parts:				
For diesel engines .....	...	591	...	275
For gasoline engines .....	...	3,581	...	981
For marine engines .....	...	104	...	2,396

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961¹ and 1962¹ - Continued

Description	1961		1962	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
Fire-fighting equipment:				
Pumpers .....	...	3,435	...	4,324
Other fire-fighting equipment, including hose trucks, ladder trucks, etc. ....	...		...
Food products machinery (including beverages and tobacco) machinery:				
Bakers' machinery:				
Mixing machines	717	806	650	786
Ovens	111	794	113	800
Other bakers' machinery and parts .....	...	669	...	723
Dairy and milk products plant machinery, excluding milking machines .....	...	2,703	...	1,628
Flour and grist mill machinery .....	...	749	...	626
Other food products machinery and parts, including milking machines .....	...	2,608	...	4,587
Foundry equipment .....	...	401	...	802
Metal-working machinery:				
Machine tools, metal-working:				
Boring machines	3	3	3	3
Drilling machines	3	3	3	3
Grinding machines and grinders	135	250	48	226
Lathes, engine and turret	199	589	518	1,810
Milling machines	3	3	3	3
Presses .....	...	1,536	254	2,079
Punching machines	3	3	3	3
Rolls, bending and straightening	601	462	823	348
Shapers	3	3	3	3
Shearing machines	3	3	3	3
Other machine tools .....	...	3,213	...	2,854
Machine tool parts and accessories .....	...	762	...	1,423
Metal-working machinery (except machine tools), including rolling mill machinery .....	...	6,454	...	12,955
Printing and bookbinding machinery and parts	4	4	...	3,114
Pulp and paper industries machinery and parts .....	...	23,619	...	26,693
Service industry equipment (including vending machines):				
Commercial laundry and dry cleaning equipment, including coin operated dry cleaners ..	..	1,871	..	3,037
Vending machines .....	...	688	...	2,031
Service station and garage equipment:				
Auto lifts	1,749	1,185	1,808	1,574
Gasoline-dispensing pumps	8,021	4,574	7,947	4,427
Other garage equipment .....	..	587	..	1,234
Other service industry machinery .....	..	2,436	..	3,201
Ships' machinery and fittings (except winches) .....	..	3,489	..	4,777
Textile industries machinery and parts .....	..	328	..	211
Transmission equipment and bearings:				
Bearings, ball and roller, and parts .....	..	16,062	..	19,470
Cut tooth and cast tooth gears .....	..	3,035	..	2,715
Flexible couplings .....	..	895	..	980
Pulleys .....	..	419	..	177
Sprocket chain and drive chain .....	..	1,661	..	2,112
Speed reducer units .....	..	2,105	..	3,134
Other transmission machinery and parts .....	...	3,935	...	5,433
Water and sewage treatment equipment:				
Domestic water softeners	14,776	1,648	13,577	1,574
Other water and sewage treatment equipment and parts .....	...	4,513	...	4,688
Woodworking machinery (excluding power driven hand tools and home workshop tools):				
Band sawing machines	5	5	5	5
Lathes	5	5	5	5
Planers	5	5	5	5
Rip and cross cut saws	5	5	5	5
Other woodworking machinery and parts .....	...	2,581	...	2,629

See footnotes at end of table.

TABLE 8. Shipments of Goods of Own Manufacture - All Industries, 1961¹ and 1962² - Concluded

Description	1961		1962	
	Quantity	Value	Quantity	Value
	No.	\$'000	No.	\$'000
General purpose industrial machinery:				
Heat exchangers, industrial .....	...	4,900	...	7,190
Wrapping and packaging machinery and parts .....	...	1,855	...	2,502
Other general purpose industrial machinery and parts .....	...	6,512	...	1,765
Ventilating, exhaust and dust-collecting equipment .....	..	13,112	..	15,253
Special industries machinery:				
Plastics industry machinery .....	..	2,457	..	2,047
Rubber-working machinery .....	..	1,568	..	2,837
Cement mill machinery .....	..	1,568	..	852
Saw-mill machinery, including lumber handling equipment .....	..	3,830	..	5,152
Logging, machinery .....	..	1,649	..	5,136
Grain elevator machinery .....	..	855	..	1,564
Other special industry machinery and parts .....	..	12,823	..	17,309
Welding machinery, electric .....	...	3,930	...	4,337
Miscellaneous machinery:				
Blowers for domestic furnaces	192,755	2,364	170,543	2,090
Furnaces and ovens, industrial (excluding hot air), electric and other:				
Furnaces, including metal melting and metal heat treating furnaces .....	..	1,535	..	1,234
Ovens, including baking and drying but excluding bakers' ovens .....	..	736	..	914
Gas burners:				
Residential	9,251	586	13,036	734
Commercial and industrial	1,582	491	2,527	694
Lawn mowers:				
Hand				
Power	125,404	5,891	165,174	7,305
Oil burners, power:				
Domestic	96,462	6,468	90,551	6,538
Commercial and industrial	3,708	1,328	3,460	1,236
Power tools, hobby and home workshop .....	...	4,565	...	5,704
Saws, power chain, and parts:				
Saws	85,488	6,337	103,736	6,789
Parts .....	...	3,981	...	6,183
Screens, vibrating (including ore screens) .....	..	1,002	330	1,833
Snow blowers, other than highway type .....	..	..	5,387	532
Stokers:				
Domestic	509	238	445	203
Commercial and industrial	252	600	221	491
All other machinery and parts, not separately specified .....	...	39,231	...	37,229
Totals .....	...	440,905	...	522,684

¹ Includes shipments from other industries which manufacture, as a secondary activity, the commodities listed above.

² Included with "Other mining and ore processing machinery".

³ Included with "Other machine tools".

⁴ Included with "Other special industry machinery and parts".

⁵ Included with "Other woodworking machinery".

⁶ The total for 1962 and the revised 1961 total shown in the above table reflect a change in valuation which is based on "installed" value rather than value at plant as in previous years. On this account 1962 and 1961 totals are not comparable with previous years.

List of Establishments, 1962

Firm	Location
Newfoundland:	
Barnes, E.F. Ltd.	St John's
Nova Scotia:	
Acadia Gas Engines Ltd.	Bridgewater
Chisholm Industries Ltd.	New Glasgow
Dominion Steel & Coal Corporation Ltd.	Trenton
Graeme, Stuart	Fall River
Hawboldt Gas Engines Ltd.	Chester
Oxford Foundry & Machine Co. Ltd.	Oxford
New Brunswick:	
Lauder, Rudolph W.	Hillsborough
Northern Machine Works Ltd.	Bathurst
Quebec:	
American Air Filters of Canada Ltd.	Montreal 9
Ashworth Card Clothing Co. Ltd.	Granby
Autostair Ltd.	St. Hyacinthe
Blank, W.M., Mfg. Co.	Montreal 3
Bouteilles Copak Enr.	Ste. Claire
Braidwood, John & Sons, Ltd.	Montreal
Canada Fans Ltd.	Montreal 30
Canadian Allis-Chalmers Ltd.	Lachine
Canadian Bowl-Mor Co. Ltd.	Terrebonne
Canadian Ingersoll-Rand Co. Ltd.	Montreal
Côté Bros. & Burritt Ltd.	Montreal
Côté, Jos., Inc.	St. Ephem
Darling Brothers Ltd.	Montreal
Dominion Engineering Works Ltd.	Montreal
Electrovert Mfg. Co. Ltd.	Montreal
Filion & Fils, Ltée	Giffard
Forano Limited	Plessisville
Gulbraith, R.W. & Co.	Montreal 3
General Mfg. Co. Ltd.	Drummondville
Gosselin, J.A. Co. Ltd., The	Drummondville
Hardt, J. Mfg. Inc., The	Lachine
Hardy, Eugène & Frères Ltée	St. Casimir, Co. Portneuf
Harrington Tool & Die Co. Ltd.	Lachine
Herbs Electric Reg'd.	Montreal 20
Hilaire Blanchet Ltée	Drummondville Sud
Hollinger Machine Co. Ltd.	Montreal
Hooper, S.W. & Co. Ltd.	Sherbrooke
Houghco Products Ltd.	Candiac
Hydraulic Machinery Co. Ltd.	Montreal
Ideal Poultry Equip. Reg'd.	St. Felix de Valois
Instruments (1951) Ltd.	Noranda
James Equip. Ltd. (Hall Machinery Div.)	Sherbrooke
Jeffrey Mfg. Co. Ltd.	Ville La Salle
L'Air Liquide	Montreal 2
La Compagnie F.X. Drolet	Quebec
La Fonderie St. Anselme Ltée.	St. Anselme Station, Dorchester Co.
La Fonderie Trottier Inc.	St. Casimir, Co. Portneuf
La Machinerie Oméga Ltée	St. Hyacinthe
Lalonde, Frank P. Ltd., The	Pointe Claire
Les Industries Marco Inc.	Marieville
Leros Inc.	Sorel
Lorraine Graining Machine Enrg.	Quebec 10
Machinerie Etchemin Inc.	St. Romuald
Makinson Winchester Ltd.	St. Laurent
Materials Engineering Co.	St. Lambert
Montreal Gear Works Ltd.	Montreal 34
Munck (Canada) Ltd.	Montreal 12
Nagle Elevator Co. Inc.	Montreal
National Electric Refrigerator Ltd.	Montmagny
Pacific Equipment Co. Ltd.	St. Pierre
Paco Corp.	Montreal 2
Paquin, Alph. & Fils	Joliette
Peltier Handling Equip. Co. Ltd.	Montreal 4
Penn Ventilator Can. Ltd.	Farnham
Pneumatic & Hydraulic Co. Ltd.	Montreal
Poitras, Jos. & Fils Ltée	L'Isletville
Pulp & Paper Mills Accessories Ltd.	St. Laurent
Rack Industries of Canada Ltd.	Farnham
Ross of Canada (Div. of Midland-Ross Ltd.)	Ville La Salle
Sandvik Canadian Ltd.	Montreal 9
Savage Industries Ltd.	Lachine
Separator Engineering Mfg. Ltd.	Montreal
Sherbrooke Machineries Ltd.	Sherbrooke
Sorel Industries (1959) Ltd.	St.-Joseph De Sorel
Southern Industries Ltd.	Marieville
Ste. Thérèse Allied Industries Ltd.	St. Rose De Laval
Super Industries Co. Reg'd.	Montreal 10
Tardif, Armand Cie Ltée	Boischatel

List of Establishments, 1962 - Continued

Firm	Location
Quebec - Concluded:	
Technical Accessories Ltd.	Montreal 36
Terry Machinery Co. Ltd.	Ville St. Laurent
Thibault, Pierre Canada Ltée	Pierreville
United Shoe Machinery Co. of Canada Ltd.	Montreal 4
Vessot, S. Co. Ltd.	Joliette
Vincent, Hector Inc.	St. Valérien
Wilson Machine Co. Ltd.	Montreal
Ontario:	
Adams, J.D. Co. Ltd.	Paris
Airetool Canada Ltd.	Brantford
Albany Pump Co. Ltd.	Toronto 2 B
American Can. Co. of Canada Ltd.	Niagara Falls
American Standard Products (Canada) Ltd.	Toronto 4
Anderson Bros. Tool & Die Co. Ltd.	Toronto 9
Anderson, J.W. Co. Ltd.	Dundas
Arcan Eastern Ltd.	Hamilton
Armstrong, S.A. Ltd.	Toronto 16
Ashton Press Mfg. Co. Ltd.	Ottawa 1
Atlas Engineering & Machine Co. Ltd.	Toronto 2
B.L.M. Automatic Clutch Ltd.	Scarborough
Baer Elevator Supplies Ltd.	Toronto 1
Barber, Chas. & Sons	Meaford
Barber-Greene Canada Ltd.	Don Mills
Bata Engineering (Div. of Bata Shoe Co.)	Batawa
Bauer Bros. Co. (Canada) Ltd.	Brantford
Beckett Elevator Ltd.	Toronto 8
Bertram, John & Sons Co. Ltd.	Dundas
Bettger Industries Ltd.	Stratford
Black Clawson-Kennedy Ltd.	Owen Sound
Black & Decker Mfg. Co. Ltd.	Brockville
Blakeslee, G.S. & Co. Ltd.	Toronto 16
Blow Press Ltd.	Acton
Bowser, S.F. Co. Ltd.	Hamilton
Brantford Oven & Rack Co. Ltd., The	Brantford
Brewer Electric	Scarborough
Brown Boggs Foundry & Machine Co. Ltd.	Hamilton
Brown Pintube (Canada) Ltd.	St. Thomas
Brunner Corp. (Canada) Ltd.	Toronto
Bucyrus-Erie Co. of Canada Ltd.	Guelph
Burnside, Harry	Toronto 18
Byron Jackson of Canada Ltd.	Toronto 13
C-Pak Machine Ltd.	Agincourt
C.L.C. Machinery Co.	Hamilton
C.S.S. Manufacturing Ltd.	Toronto 3
Campbell Machinery Ltd.	Kitchener
Camtred Limited	Richmond Hill
Canada Machinery Corp. Ltd.	Galt
Canadian Baker Perkins Ltd.	Brampton
Canadian Beaver Co. Ltd.	Toronto 8
Canadian Bird Equipment Ltd.	Hamilton
Canadian Blower & Forge Co. Ltd.	Kitchener
Canadian Clark Ltd.	St. Thomas
Canadian General Electric Co. Ltd.	Toronto 3
Canadian Koebel Diamond Tools Ltd.	Toronto 14
Canadian Longyear Ltd.	North Bay
Canadian Mechanical Handling Systems Ltd.	Windsor
Canadian Mines Equip. Co. Ltd.	London
Canadian Monorail Co. Ltd.	Brampton
Canadian Printing Machinery Co. Ltd.	Toronto 2B
Canadian S.K.F. Co. Ltd.	Scarborough
Canadian Special Machinery Co.	Port Credit
Canadian Steelmaster Co. Ltd.	Toronto 18
Canadian Westinghouse Co. Ltd.	Hamilton
Canners Machinery Ltd.	Simcoe
Christensen Diamond Products Co. (Canada) Inc.	North Bay
Clematic Limited	Scarborough
Clarke Bros. Machine Co. Ltd.	Toronto 2
Clarke, D.R. Engine Co. Ltd.	Toronto 19
Climax Baler Co. Ltd.	Hamilton
Clinton Products (Canada) Ltd.	Wheatley
Coates, James D. Ltd.	Toronto
Convento Equip. Mfg. Ltd.	Kitchener
Cooper-Bessener of Canada Ltd.	Stratford
Cooper-Chapman Ltd.	Weston
Craig Bit Co. Ltd., The	North Bay
Crane Canada Limited	Rexdale
Crane Cartier Canada Ltd.	Toronto 13
Cyr, R.J. Co. Ltd.	Windsor
Darrigo Bros. Mfg. & Sales	Toronto 1
Day Co. of Canada Ltd., The	Rexdale
Delamere & Williams Co. Ltd.	Toronto 11
Delhi Industries	Delhi
De Vilbiss (Canada) Ltd.	Barrie
Dillon, Thomas A. Ltd.	Toronto 15
Docyleo Limited	Weston
Domestic Electric Co.	Toronto 2

List of Establishments, 1962 - Continued

Firm	Location
Ontario - Continued:	
Dominion Brake Shoe Co. Ltd.	Brantford
Dominion Road Machinery Co. Ltd.	Goderich
Dominion Rubber Co. Ltd.	Kitchener
Dorr-Oliver-Long Ltd.	Orillia
Dover Products Corp. of Canada Ltd.	Chatham
Emco-Wheaton Div., Emco Ltd.	Mimico
Emerson-Pryne of Canada Ltd.	Toronto 10
Epps, C.H. Mfg. Ltd.	Clinton
Erie Iron Works	St. Thomas
Eriez of Canada Ltd.	Toronto 15
Ex-Cell-O Corp. of Canada Ltd.	London
Factory Equipment Ltd.	Aurora
Pastcut Bits Ltd.	Ferris
Filtration Products of Canada Ltd.	Thorn Hill
Fine Pitch Gears Ltd.	Toronto 16
Fischer Bearings Mfg. Ltd.	Stratford
Fisher Gauge Works Ltd.	Peterborough
Fleck, Alexander Ltd., The	Ottawa 3
Fleming Motors Ltd.	Galt
Fluid Power Limited	Toronto 9
Ford Smith Machine Co. Ltd., The	Hamilton
Fosco Steel Mfg. Co.	Clarkson
Francis Shaw (Canada) Ltd.	Burlington
Fraser, Kenneth S. Co. Ltd.	Toronto 8
Gardner-Denver Co. (Canada) Ltd.	Woodstock
Gardner Steel Ltd.	Clarkson
General Conveyor Co. Ltd.	Willowdale
Gilbert & Barker Mfg. Co. Ltd.	Toronto 3
Gorman-Rupp of Canada Ltd.	St. Thomas
Greay Mixing Equip. Ltd.	Toronto 19
Grover Pneumatic Tubes (Canada) Ltd.	Windsor
Hamilton Gear & Machine Co. Ltd.	Toronto 4
Hamman Car & Engineering Ltd.	Hamilton
Hastings Machine Tools Ltd.	Niagara Falls
Heath & Sherwood Ltd.	Kirkland Lake
Hein-Werner of Canada Ltd.	Ajax
Hi-Lo Equip. (Canada) Ltd.	Toronto 18
Robert Mfg. Co. Ltd., The	Don Mills
Howden, James & Parsons of Canada Ltd.	Scarborough
Hubbard Portable Oven Co. of Canada Ltd.	Toronto
Humfilter Mfg. Ltd.	Dundas
Husky Mfg. & Tool Works (Ontario) Ltd.	Toronto
Hydraulex Limited	Toronto 18
I.S.F. Electro Methods Ltd.	Toronto 9
Inglis, John Co. Ltd.	Toronto 3
International Welder Corp. Ltd.	Windsor
Involute Gear Co., The	Toronto 4
Iroquois Equipment Ltd.	Weston
J.M.G. Manufacturing Ltd.	Thornbury
Jacuzzi Universal (Canada) Ltd.	Rexdale
Jaeger Machine Co. of Canada Ltd.	St. Thomas
Joy Mfg. Co. (Canada) Ltd.	Galt
Kiekhaefer Mercury of Canada Ltd.	Toronto 19
King, G.W. of Canada Ltd.	Burlington
King Seagrave Ltd.	Woodstock
Kingsville Pump & Machine Co. Ltd.	Kingsville
Knowles Machinery Co.	London
Koehring-Waterous Ltd.	Brantford
Komline-Sanderson Ltd.	Brampton
Lafrance Fire Engine & Foamite Ltd.	Toronto 18
Lambert Ride Prime Ltd.	Courtland
Lanham Machinery Co. of Canada Ltd.	Toronto 1
Lau Products Ltd.	Kitchener
Lawson Packaging Machinery Ltd.	Toronto 14
Leepo Machine Products Ltd.	Riverside
Leitch, Arthur S. Co. Ltd., The	Downsview
Link-Belt Limited	Toronto 13
Link-Belt Speeder (Canada) Ltd.	Woodstock
London Concrete Machinery Co. Ltd.	London
MacDonald, K.R. Knitting Machines	Georgetown
Mathews Conveyor Co. Ltd.	Port Hope
McCrae, John Machine & Foundry Co. Ltd., The	Lindsay
McCulloch of Canada Ltd.	Toronto
McGraw-Edison (Canada) Ltd.	Toronto 3
McInnis Conveyors Ltd.	Sandwich East
McIntyre Industries (London) Ltd.	London
McKechnie, James A. Ltd.	Toronto 13
McLachlan, John Foundry	Cannington
Meaford Steel Products Ltd.	Meaford
Mefab Products	Oakville
Meingast, H.M. & Sons Ltd.	Owen Sound
Mico Mechanical Installation & Conveyor Co. Ltd.	Hamilton
Mid-Mar Ltd.	Brampton
Midland Foundry & Machine Co. Ltd.	Midland
Moog, R.J. & Co. Ltd.	North Bay
Montgomery Elevator Co. Ltd.	Toronto 18
Moore Dry Kiln Co. of Canada Ltd.	Brampton
Morrisette Mfg. & Sales Ltd.	Halleybury
Morris, Herbert Crane & Hoist Co. Ltd., The	Niagara Falls

List of Establishments, 1962 - Continued

Firm	Location
Ontario - Continued:	
Morse Chain of Canada Ltd.	Simcoe
Moto-Mower Inc.	Ingersoll
Muirhead Fromson Ltd.	Don Mills
Napanee Industries Ltd.	Napanee
National Equipment Co. Ltd.	Toronto 3
Neptune (Canada) Pump & Mfg. Co. Ltd.	Orillia
Northcott-Morris Machine Co.	Toronto 17
Northern Crane & Hoist Works Ltd.	Windsor
Oil Well Supply Co. Ltd., The	Petrolia
Otis Elevator Co. Ltd.	Hamilton
Outboard Marine Corp. of Canada Ltd.	Trenton
P.C. Manufacturing Ltd.	Port Credit
Packsack Diamond Drills Ltd.	North Bay
Paramount Gear Works Ltd. (Hamstell Corp. Ltd.)	Toronto 15
Pathex Canada Ltd.	Don Mills
Patterson Foundry & Machine Co. (Canada) Ltd., The	Toronto 13
Peabody Engineering Corp. of Canada Ltd.	Toronto 18
Pendrith Machinery Ltd.	Toronto 2B
Perrin, William R. Ltd.	Toronto 2
Plewes-Jackson Engineering Ltd.	Toronto 3
Pneuvoyor Systems Ltd.	Woodstock
Power, C.J. Automatic Tools Ltd.	Ajax
Provincial Butchers Machinery Co. Ltd.	Toronto 10
Provincial Engineering Ltd.	Niagara Falls
Pumps & Softeners Ltd.	London
Ramsey R.E.C. Ltd.	Richmond Hill
Rapistan Canada Ltd.	Rexdale
Reliance Tool & Die Casting Ltd.	St. Thomas
Remington Arms of Canada Ltd.	Toronto 18
Renold Chains Mfg. Ltd.	Brantford
Retor Developments Ltd.	Galt
Rex Chainbelt (Canada) Ltd.	Willowdale
Roberts, F.W. Mfg. Co. of Canada Ltd.	Niagara Falls
Robertson Hydraulic Machinery Ltd.	Rouge Hills
Rock Drill Rod Co. Ltd.	Toronto 15
Roelofson Elevator Co. Ltd.	Toronto 18
S.M.S. Mfg. Co. Ltd.	Weston
St. Lawrence Engine Co. Ltd., The	Brockville
Sanders, L.J.R. Engineering Co. Ltd.	Galt
Sandy Road Equipment Ltd.	Goderich
Sass Manufacturing Co. Ltd.	RR No. 4, Chatham
Scott Hydraulics-Pneumatics Ltd.	North Bay
Shaft Machines Ltd.	Toronto
Shearing Elbow Machinery	Tillsonburg
Sheldons Engineering Ltd.	Galt
Sheridan-Loach Ltd.	Scarborough
Sihi Pumps Ltd.	Guelph
Simpson Bros. Machine Co. Ltd.	West Hill
Skiltools Ltd.	Toronto 9
Smart-Turner Machine Co. Ltd.	Hamilton
Smit, J.K. & Sons of Canada, Ltd.	Toronto
Sovereign Water Conditioners of Can. Ltd.	Scarborough
Sparkler International Ltd.	Toronto 19
Specialties Mfg. Co.	Hamilton
Standard-Modern Tool Co. Ltd.	Toronto 10
Sta-Rite Pumps (Canada) Ltd.	Ajax
Stathmos Scale Mfg. Ltd.	Scarborough
Stephens-Adamson Mfg. of Canada Ltd.	Belleville
Stevens Co. of Galt Ltd., The	Galt
Stouffville Machine & Tool Works Ltd.	Stouffville
Stratford Machine & Tool Co. Ltd.	Stratford
Strippit Tool & Machine Co.	Brampton
Sunnen Products Co. Ltd.	Chatham
Sutton Tool & Die Mfg. Co.	Brantford
Sweco Canada Ltd.	Etobicoke
Taymer Industries Ltd.	Cooksville
Timberland Ellicott Ltd.	Woodstock
Timken Roller Bearing Co., The (Canadian Div.)	St. Thomas
Tokheim of Canada Ltd.	Toronto
Torrington Mfg. Co. of Canada Ltd., The	Oakville
Trilon (Canada) Ltd.	Scarborough
True Forge Ltd.	Preston
Tubar Handling Equip. Ltd.	Kitchener
Turbo Gas Equip. Ltd.	Delhi
Turnbull Elevator Co. Ltd.	Toronto 2B
Unit Lift of Canada Ltd.	Cooksville
United Pumps of Canada, Ltd.	Toronto
United Steel Corp. Ltd. (Dodge Mfg. Div.)	Toronto 9
United Steel Corp. Ltd. (Cdn. Meade-Morris Div.)	Welland
Universal Labelling Machines Ltd.	Scarborough
Upton Bradeen & James Ltd.	Galt
Vickers Sperry of Canada Ltd.	Toronto 18
Viking Pump of Canada Ltd.	Windsor
Vulcan Equipment Ltd.	Toronto
Wallace & Tiernan Ltd.	Scarborough
Wards Oven Co. Ltd.	Toronto
Water Softening Equip. Ltd.	Scarborough
Waterloo Mfg. Co. Ltd., The	Waterloo

List of Establishments, 1962 - Continued

Firm	Location
Ontario - Concluded:	
Watson John Mfg. Co. Ltd., The	Ayr
Wayne Pump Canada Ltd.	Toronto 3
Wayne Sweeper Mfg. Canada Ltd.	Weston
Webb, Jervis B. Co. of Canada Ltd.	Hamilton
Weber Mfg. Co. Ltd.	Windsor
Webster Air Equip. Ltd.	London
West Bend of Canada Ltd.	Barrie
West Machinery Co. Ltd.	Simcoe
Westaway, W.H. Co. Ltd.	Hamilton
Westco Pump & Engineering Ltd.	Toronto 21
Wheel Truing Tool Co. of Canada Ltd.	Toronto 2B
Whiting Corp. (Canada) Ltd.	Windsor
Williams Machines Ltd.	Welland
Williams, John, Machinery Ltd., The	Preston
Winston Elevator Co.	Cooksville
Woods of Colchester (Canada) Ltd.	Toronto 18
Worthington (Canada) Ltd. & Mason-Neilan Div.	Don Mills
Yates, P.B. Machine Co. Ltd., The	Brantford
	Hamilton
Manitoba:	
Betts-Eastman Ltd.	Winnipeg 10
Chicago Blower (Canada) Ltd.	Winnipeg 25
Delro Industries Ltd.	Winnipeg 21
Falcon Machine Works Ltd.	St. Boniface
Filtersoft Ltd.	Winnipeg 5
Joy Mfg. (Canada) Ltd.	Winnipeg
Kipp Kelly Ltd.	Winnipeg
McLean Machinery Co. Ltd.	Winnipeg
Monarch Machinery Co. Ltd.	Winnipeg
Oshkosh Filter & Softner Co. (Canada) Ltd.	Winnipeg
Peterson Foundry & Machine Works	Brandon
Pydee Engineering Co. Ltd.	Winnipeg
Senick Blacksmithing	Winnipeg 2
Strong-Scott Ltd.	Winnipeg 4
Wheeler Hand Trucks Ltd.	Winnipeg
	Winnipeg 9
Saskatchewan:	
Leach, J.R. & Son Ltd.	Prince Albert
Mid-West Equipment Ltd.	Regina
Regal Softener Equip. Ltd.	Regina
Richardson Road Machinery Co. Ltd.	Saskatoon
Schulte Welding & Machine	Englefield
Western Machine & Engineering Ltd.	Regina
Alberta:	
A.T.P. Mfg. Co. Ltd.	Edmonton
Automatic Sprinkler Co. of Canada Ltd.	Calgary
Berg Industries	Linden
Canadian Oil Tool Mfg. Ltd.	Calgary
Christensen Diamond Petroleum Ltd.	Edmonton
Coutts Machinery Co. Ltd.	Edmonton
Davis-Lynch Inc.	Edmonton
Engineering Specialties (Alberta) Ltd.	Calgary
Le Grand Limited	Calgary
Major Irrigation Ltd.	Lethbridge
Premier Steel Products Ltd.	Edmonton
Smit-Connors, J.K. Ltd.	Red Deer
Smith & Schneider Sawmill Equip. Ltd.	Chinook Valley
Weatherford Oil Tool Co. Ltd.	Edmonton
Western Rock Bit Co. Ltd.	Calgary
British Columbia:	
Allard Engineering (1957) Ltd.	New Westminster
Anderson Blowpipe & Mfg. Co. Ltd.	Vancouver
Automatic Equip. & Service Co.	Vancouver 10
Boyles Bros. Drilling Co. Ltd.	Vancouver
Canadian Car (Pacific) Ltd.	Vancouver 4
Canadian Mobile Co. Ltd.	Vancouver
Canadian Sumner Iron Works Ltd.	Vancouver 12
Carbitron Development Ltd.	Vancouver 6
Chutter Hydraulics & Machinery Ltd.	Vancouver 9
Colby Crane & Mfg. Ltd.	New Westminster
Columbia Machinery & Equipment Ltd.	Nakusp
Conveyair Mfg. Div. Ltd.	North Vancouver
Gearmatic Co. Ltd.	North Surrey
Hub Fire Engines & Equip. Ltd.	Abbotsford
Industrial Marine Power Ltd.	Vancouver 6
Interior Mill Equip. Ltd.	Grand Forks
Jordan's Machine Works Ltd.	South Burnaby
Jay Mfg. Co. (Canada) Ltd.	New Westminster

List of Establishments, 1962 - Concluded

Firm	Location
British Columbia - Concluded:	
Kelowna Machine Shop Ltd.	Kelowna
Korth Machinery Ltd.	Vancouver
Krell Mfg. Co. Ltd.	North Burnaby
L-M Equip. Co. (B.C.) Ltd.	South Burnaby
Letson & Burpee Ltd.	Vancouver 4
Madill, S. Ltd.	Nanaimo
Moore Dry Kiln Co. of Canada Ltd.	Vancouver 10
Nicholson Murdie Machines Ltd.	Victoria
Nor West Gear & Engine Co. Ltd.	Vancouver 4
Opsal Steel Ltd.	Vancouver
Patrick Equipment Ltd.	North Burnaby
Power Machinery Ltd.	Vancouver 12
Progressive Engineering Works Ltd.	Vancouver 10
Pumps & Power Ltd.	Vancouver 6
Pyramid Machine Works Ltd.	North Vancouver
Regent Steel Specialties Ltd.	South Burnaby
Swann, J. (1963) Ltd.	Vancouver 6
Trump Ltd.	Oliver
Tyee Machinery Co. Ltd.	Vancouver 9
Vancouver Gear Works Ltd.	Vancouver 12
Vancouver Iron & Engineering Works Ltd.	Vancouver
Vancouver Mill Machinery Ltd.	Burnaby 2
Wagner Engineering Ltd.	Vancouver 9
Wagstaff Hoist Ltd.	Vancouver 12
Webb & Gifford Ltd.	New Westminster
Weldco Limited	Vancouver 5
Westcoast Automation Ltd.	New Westminster
Westminster Iron Works Co. Ltd.	New Westminster
Wilco Mfg. Limited	Vancouver
Willock Mfg. Co. Ltd.	Langley
Yates, P.B. (Western) Ltd.	Burnaby

EXPLANATORY NOTES

This report is one in a series of about 140 publications which present the results of the 1962 Census of Manufactures. Most reports in this series refer to specific industries, but there are summary reports for Canada and the provinces and special reports on geographical distribution and on type of ownership and size of establishments.

With the publication of the results of the 1962 Census of Manufactures, the Bureau has completed a major revision in the classification and concept of its annual census of manufacturing establishments. Because of its size and complexity, this project had to be carried out in three stages. The first stage was the change in classification and the results of the 1960 Census, together with the re-compilation of the 1957, 1958 and 1959 Censuses were published in the 1960 reports on the basis of the revised Standard Industrial Classification. This part of the project was confined entirely to a re-coding of existing reporting units. The second stage consisted of the implementation of the new definition of the reporting unit i.e. "establishment" as it applied to **manufacturing activities** of manufacturing establishments (See following note on "Establishment"). Results of the 1961 Census reflected this change in concept and, in order to provide comparability of data for recent years, the 1961 reports contained principal statistics on the basis of the new establishment definition for years back to 1957.

The third stage which was the extension of the definition of the establishment to cover **total activities** of manufacturing establishments is reflected in the statistics for 1961 and 1962 contained in this report. This full implementation of the new definition of the establishment has resulted in an extension of the data to non-manufacturing activities of manufacturing establishments and in additional changes in the 1961 statistics of manufacturing activities. Statistics on manufacturing activities will continue to be shown separately as in the past but, beginning with 1961, data on all operations (total activity) of manufacturing establishments will also be given. By definition "total activity" relates to all operational data and excludes such non-operational items as rent, interest and dividends. In addition, statistics on man-hours paid will be included as part of the regular series of industry statistics. For many industries, adjustments and revisions were made to the 1961 data on **manufacturing activities** which were published during the second stage to bring them in line with reporting procedures followed in the 1962 Census and to reflect the final application of the new concept. The 1961 statistics on manufacturing activities contained in this report are thus not entirely comparable with those published in the 1961 reports. However, the 1961 statistics are shown in this publication in both their original and revised forms in order to provide a link with the immediate past. A more complete account of recent changes and additions and brief descriptions of the principal industry statistics are given in following sections of these notes.

Standard Industrial Classification

The revised Standard Industrial Classification which was introduced with the 1960 Census of Manufactures and applied to the results of the 1957, 1958 and 1959 censuses provides for a breakdown of the manufacturing universe into 140 industries arranged in 20 major groups. Custom Tailoring Shops is the only industry class in the Manufacturing Industries Division of the classification which is not covered in the annual Census of Manufactures. It is surveyed as part of the Decennial Census of Merchandising and Service Establishments. Of the 140 "three-digit" industry classes in the Manufacturing Industries Division, 21 are further broken down into 67 "four-digit" sub-classes. With the exception of the Wood Preservation and Sound Recording industries, the figures for which are at present confidential and have to be included with those of related industries, the statistics for all of the "four-digit" sub-classes are published regularly. Thus, at the Canada level, principal statistics are compiled for 183 industries. These cannot all be published separately by province because of the confidential nature of the data in certain provinces.

Reporting establishments are classified or allotted to specific industries in the classification system on the basis of the value of principal products made or shipped. In general, establishments primarily engaged in repair work (Shoe Repair Shops, Motor Vehicle Repair Shops etc.) are not included in manufacturing industries. Exceptions are establishments primarily engaged in furniture, ship, boat, aircraft and railroad rolling stock repairs which are classified to the manufacturing industries producing the products involved. Establishments primarily engaged in assembling parts into complete units have always been included in manufacturing industries.

Full details concerning the revised classification system are contained in the Standard Industrial Classification Manual, Catalogue No. 12-501, which is available from either the Queen's Printer or the Dominion Bureau of Statistics.

It should be noted that two new industries (Poultry Processors and Dental Laboratories) and three new groups of establishments (book publishers in the Publishing Industry, electro-plating establishments in the Metal Stamping, Pressing and Coating Industry and prescription branches in the Ophthalmic Goods Manufacturers Industry) have been included in the 1961 (revised) and 1962 Census statistics and will continue to be included thereafter. They were surveyed for the first time in the 1960 Census (1961 Census in the case of prescription branches) in line with the revised classification but, since they did not represent new production, they were removed from the 1960 and 1961 compilations published in the 1961 Census reports in order to provide complete comparability of data over the period 1957-61. Statistics for this period are repeated in the 1962 reports to supply a link with the revised 1961 data and the new 1962 statistics.

Establishment

The reporting unit in the Census of Manufactures is the **establishment**. The majority of establishments are firms, but many firms have more than one manufacturing establishment. Such firms are requested to submit a separate Census of Manufactures report for each manufacturing establishment which can meet the reporting requirements described below.

Beginning with the 1961 Census of Manufactures the establishment is defined as follows:

"The smallest unit which is a separate operating entity capable of reporting all the following principal statistics:

- Materials and supplies used,
- Goods purchased for resale as such,
- Fuel and power consumed,
- Number of employees and salaries and wages,
- Inventories,
- Shipments or sales."

Following is a description of the main features of the new establishment concept introduced in the 1961 Census, how they differ from those of the old "activity" concept and the steps taken to correct for breaks in continuity.

(a) The establishment is to be distinguished from smaller subdivisions or departments which do not have records that permit them to report all items required of an establishment. Prior to 1961, some establishments were required to submit two or more separate reports when they were engaged in activities which were classifiable to different industries. Beginning with 1961, separate reports for such activities are required only in cases where accounting records can provide the necessary input and output elements of principal statistics. Special reporting arrangements were made with respondents when the acceptance of combined reports would have seriously affected the statistics for particular industries or areas. Where continuity of industry statistics was affected by this change in reporting procedures, adjustments to the data were made back to 1957 in order to maintain comparability of the series for recent years.¹

(b) A manufacturing establishment is typically a factory, mill or plant principally engaged in manufacturing activities. Prior to 1961, the Census of Manufactures attempted to cover the manufacturing activities of all establishments, whether or not they were primarily engaged in manufacturing. Beginning with the 1961 Census, establishments (accounting entities) which are not primarily engaged in manufacturing are no longer included as manufacturing establishments in the basic industry statistics.¹

¹ Most of these adjustments were made when the results of the 1961 Census were being compiled. Since publication of these results in the 1961 reports additional adjustments were made to the 1961 data, as noted earlier, and these are reflected, where applicable, in the revised 1961 statistics contained in this report.

Again, adjustments were made to reflect the removal of such reporting units for the period 1957-60. These reporting units are now listed as establishments in other Bureau surveys, such as Wholesale Trade, Construction etc. This has resulted in a somewhat smaller universe represented by the Census of Manufactures. In terms of overall 1960 Census results, the number of establishments transferred to other industries totalled 2,786 or 8% but these represented only 0.7% of total employment and of total value of shipments of manufactured products. In order, however, to maintain complete coverage of certain commodity items produced mainly in manufacturing establishments, many non-manufacturing establishments are now surveyed by the Industry Division for commodity shipments only and the latter are included in those tables of industry reports showing shipments of certain commodities "from all industries".

(c) A manufacturing establishment may be, and often is, engaged in other activities in addition to its principal manufacturing activity. Prior to 1961 the main emphasis in the Census of Manufactures was on manufacturing activity. Beginning with 1961, each establishment reports on all the activities carried out within its accounting boundaries (except income from investments such as rent, interest and dividends) and data on different activities (manufacturing, trading in goods not of own manufacture, construction by own labour force, revenue from services etc.) are requested separately. However, the statistics published in the 1961 reports were confined to manufacturing activity only in order to maintain comparability with previous years and to permit a more thorough audit of the new data. The 1962 reports contain principal statistics on total activities of manufacturing establishments for 1961 and 1962 with the main elements of manufacturing activity shown separately as in the past. It should be noted that the statistics for separate activities are not completely consistent. Some respondents cannot distinguish in their records materials, shipments and inventories relating to own manufacturing activities from those relating to goods not of their own manufacture or to other activities and can report operational data in total only under manufacturing activity. This situation has always existed, however, and is not considered important enough to invalidate the use of the data in the measurement of manufacturing as an "activity". The values assigned by the respondent to materials and shipments of own manufactured goods include costs in varying degrees that relate to internal (to the establishment) transportation, warehousing and selling activities, but it is not possible to make adjustments to arrive at a uniform valuation for manufacturing activity only; although valuation at the establishment "boundary" must be accepted, the items valued under manufacturing activities still relate, in most cases, to "goods of own manufacture". In the case of employment only data on manufacturing production workers and manufacturing man-hours can be assigned, in total, to manufacturing activity; administrative and office employees can seldom be allocated to separate activities.

Complete consistency, therefore, can be obtained only at the "all operations" (total activity) level, and for studies or statistical measures requiring accurate co-ordinated data, the "total" statistics should be used.

(d) Additional changes resulted from intensive editing and follow-up consistent with the introduction of the new concept. An example of such changes is the provision for the elimination, in total, of sales taxes and outward transportation charges from value of shipments. Prior to 1961, although the value of shipments for each product was requested excluding taxes and transportation charges, no allowance had been made for the reporting of these items in total when the respondents' records did not permit their deduction from the values of the individual products. Another example is a change in the valuation of shipments where, prior to 1961, a manufacturing company operating warehouses or sales outlets was reporting value of shipments in terms of an estimated manufacturer's price in accordance with the old activity concept, even though his records were not kept on this basis. Since the accounting boundary in such cases extends to distribution operations, the respondent was instructed in 1961 to report shipments at the final selling price in order to obtain more realistic and accurate data.² Adjustments were made to the value of shipments for the period 1957-60 to reflect such changes and maintain continuity of the shipments data. Since no actual data to make these corrections were available for back years, 1961 adjustment ratios were applied to the previous years for each industry affected, on the assumption that the valuation changes in 1961 applied in equal proportions to the preceding period.³

(e) The new concept also demands that inventories held apart from plant be included with plant inventories if establishment boundaries extend to warehouses and sales outlets. Prior to 1961, compilations took into account only the inventories held at plant. In this case, however, most of the missing data were available from supplementary questions in the Annual Census and from the Monthly Inventories and Shipments Survey and actual corrections could be made for previous years.

² Some manufacturing firms operate sales branches or selling warehouses as separate sales establishments for which complete accounting records of receipts, expenses, employment and sales are maintained. In such cases the plants, in effect, "sell" to the sales outlets on much the same basis as they would to independent buyers. The value of plant shipments is based on factory prices and the "boundary" of the manufacturing establishment does not extend beyond the plant. The sales outlets in such cases constitute separate sales establishments and are classified to wholesale or retail trade. Some sales outlets of manufacturing firms, although they physically handle products of the plants, do not maintain separate accounts and are generally treated for statistical purposes as extensions of manufacturing operations. Special arrangements were made for separate reporting in a few cases where the treatment of such outlets as manufacturing extensions would seriously affect the significance of statistics for particular manufacturing and trade industries.

³ See footnote 1.

(f) Prior to 1961 the Census of Manufactures did not have complete coverage of head and administrative offices and had never surveyed separate sales offices, warehouses or laboratories operated by manufacturing firms. Beginning with the 1961 survey, complete coverage of these auxiliary units was effected. In the past the employment and salaries and wages of those head and administrative offices that were surveyed were either coded in total to the industry in which the greatest portion of the company's manufacturing activities was classified or else, in the case of certain large multi-unit firms with establishments in several industries, were pro-rated among the different industries involved. In the original 1961 statistics published in 1961 reports, the same coverage and treatment of head offices was applied to maintain comparability over the 1957-61 period. Beginning with the revised 1961 statistics, all head offices and auxiliary units are covered and are processed according to the methods described below.

1. Single-Establishment Companies

In the great majority of cases central administrative and executive personnel of companies consisting only of one establishment are generally located at the site of the manufacturing plant and are automatically included in the plant reports. Where head offices and auxiliary units are geographically separate from plant locations and employ a sizeable number of workers they are surveyed on special questionnaires.

Separately located head offices, sales offices, administrative offices and other separate auxiliary units (laboratories, warehouses, etc.) do not usually constitute separate establishments⁴ for purposes of industry statistics since they do not normally generate operational revenues but give rise only to costs of operation (mainly salaries and wages) which make up part of the selling price of manufactured products and which are thus included in the value of shipments or sales. Where such units belong to single-establishment companies, they will be considered as extensions of the establishment's boundaries and their operations consolidated with the establishment's total activity.

2. Multi-Establishment Companies

In the case of companies with more than one establishment the following rules are applied:

(i) Where all the establishments of a company are classified to the same (three-digit) industry, the head office and other auxiliary units are coded to that same industry.

(ii) Where the establishments of a company are not all classified to the same (three-digit) industry but are coded to different industries, or industries in different industry groups or even different divisions

⁴ See footnote 2 for exceptions.

of the Standard Industrial Classification, the inclusion of data for head office and auxiliary units in any one of the (three-digit) industries concerned would distort the relationship between items of principal statistics. In such cases, the auxiliary units are coded at the group (two-digit) level in tabulations of industry statistics. Where multi-establishment companies cut across group or major division lines of the Classification, the head office and auxiliary units will be coded to the (two-digit) industry group in which the major part of the company's operations are classified. Although this may result in some distortion of (two-digit) industry group statistics it will eliminate distortion within groups as it will leave statistics at the (three-digit) industry level free of these company-wide data.

Period Covered

Respondents are asked to submit figures for the calendar year, if at all possible, and most reports are on this basis. Financial year reports for periods differing from the calendar year are accepted in instances where respondents find it impossible to supply calendar year data from accounting records. However, the data on employees, salaries, wages and man-hours are requested on a calendar year basis in all cases.

When establishments are operated for only a portion of a year, a report is required covering the period of operation.

Working Owners or Partners

Beginning with the revised 1961 statistics working owners and partners of unincorporated businesses are shown as a separate category in the principal statistics and are neither included in the number of employees nor in salaries and wages; there is some duplication in numbers when a person owns more than one establishment and is reported as a working owner on each census return. In all previous reports of the Census of Manufactures these workers were included as part of the number of administrative and office employees and their withdrawals were included as part of salaries. Withdrawals are defined as amounts withdrawn by owners or partners for normal living expenses, excluding withdrawals for payment of income tax.

Number of Establishments

The number of establishments represents the number of operating units (accounting entities as per the new definition of the establishment) for which separate reports are submitted. Head offices located apart from establishments and which are surveyed separately and separate sales and administrative auxiliaries that are treated as extensions of manufacturing activities are not included in the establishment count. However, the operational statistics (employment, salaries etc.) of such auxiliary units which are coded at the "three-digit"

level are included in the principal statistics of industries coded at the same level; those units coded at the "two-digit" level are included with the statistics for groups of industries.

Employees

As noted above, the number of working owners and partners are excluded from the number of employees, beginning with the revised 1961 statistics. This change brings the definition of "employees" in the Census of Manufactures in line with that of "employees" in the Bureau's monthly Employment Survey and with that of "paid workers" in the Bureau's Labour Force Survey. For purposes of historical comparisons, the number of working owners and partners should be added to total employees (beginning with the revised 1961 data) in order to correspond with the figure of "total employees" published in previous reports concerned with the Annual Census of Manufactures.

In addition to production and related workers engaged in manufacturing activities, total employees include administrative, office, sales and distribution workers as well as any production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment by its own employees (when these are treated as a separate work force) or logging (mostly in connection with sawmills or planing mills). Number of employees represents as closely as possible equivalent annual full-time employment. Adjustments are made when reported figures indicate the existence of part-time or seasonal employment.

Administrative and office employees include all executive and supervisory officials such as presidents, vice-presidents, controllers, secretaries, treasurers etc., together with managers, professional, technical and research employees, superintendents and factory supervisors above the working foreman level, and clerical staffs. Also included are employees in activities such as advertising, credit collections, purchasing, personnel, legal, medical etc. Sales and distribution workers include office personnel whose salaries are charged to selling expense, travelling salesmen, driver salesmen, truck drivers and their helpers, etc. They exclude persons working on a commission basis who are not considered regular employees.

Production and related workers in manufacturing activities include, in addition to those engaged in processing and assembling, those employed in storing, inspecting, handling, packing, warehousing, etc. They also include employees in related activities such as maintenance, repair, janitorial and watchman services. Working foremen doing similar work to that of employees they supervise are also included. Production workers employed in non-manufacturing activities such as construction undertaken for the use of the establishment, logging

employees or outside piece-workers employed in certain industries are excluded from the number of production and related workers but are part of the total number of employees in those industries.

Production and related workers are reported as those receiving pay during the last pay period of each month, an average for the year being obtained by summing the monthly figures and dividing by twelve. This procedure is followed even though the plant did not operate in all months in order to derive equivalent annual full-time employment. The numbers are somewhat affected by turn over, in that employment is overstated when an employee changes employment within the same industry during a pay period. Other categories of workers are reported in the form of annual averages. Figures on employment and man-hours refer to the calendar year whether or not some establishments report other data on a financial year basis.

Man-hours of production and related workers in manufacturing activities represent total man-hours paid (total hours at work during the calendar year plus hours not worked but nevertheless paid for, such as paid vacations, sick leave, statutory holidays etc.). In reporting overtime hours, respondents are requested to report only hours actually at work. It should be noted that the division of hours paid into production and related workers payrolls results in **average** hourly earnings and does **not** represent hourly wage rates which are collected and published by the Department of Labour and which are based on selected occupations.

Salaries and Wages

Salaries and Wages refer to gross earnings of the employees described above, **before** deductions for income tax and employees' contributions to social services such as sickness, accident and unemployment insurance, pensions etc. They include all salaries, wages, bonuses, profits shared with employees, the value of room and board where provided, commissions (paid to regular employees only), as well as any other allowance forming part of the workers' earnings. Payments for overtime are included.

Wages refer to amounts paid to production and related workers engaged in manufacturing operations as defined above. Salaries refer to amounts paid to all other categories of employees including relatively small numbers of production workers engaged in construction and extractive operations or who are employed as outside piece-workers. Figures on salaries and wages refer to the calendar year whether or not some establishments reported other data on a financial year basis.

Fuel and Electricity

Figures for fuel refer to amounts actually used (including fuel used in cars, trucks, locomotives etc.) not to purchases unless the quantities are

substantially the same. **Any fuel and electricity produced by establishments for internal consumption are not included in the total cost.** Values represent laid-down cost at the establishment including freight, duty etc.

Materials and Supplies

(a) Used in manufacturing activities. Figures represent quantities and laid-down cost values, at the establishment, of materials, supplies and purchased components owned and used during the year in manufacturing activities and related processes. The statistics represent only commodity items or physical goods (costs of services or overhead charges such as advertising, insurance, depreciation etc. are not included) whether purchased from others or received as transfers (in the form of materials, components or semi-processed goods) from other establishments of the reporting company. Respondents are required to report materials and supplies **used not purchased**. Included are maintenance and repair supplies not chargeable to fixed assets accounts and any amounts charged by other establishments for work done on materials owned by the reporting establishment. Cost of repairs or maintenance done by outside contractors and cost of returnable containers are not included.

(b) Purchases for resale as such. Figures represent the cost of materials or products purchased from others by the reporting establishment (or received as transfers from other establishments of the reporting company) for re-sale as such in the same condition as purchased. Included are any finished products received on consignment from other countries.

(c) Other materials and supplies used. Figures represent the cost of materials and supplies, if any, used in new construction and in the production of machinery and equipment (for the use of the reporting establishment) by the establishment's own employees. Included are materials used for any capital repairs and alterations carried out by the establishment's employees. Value of construction and repair work done by outside contractors is not included nor is the cost of purchased machinery and equipment. Also included is the cost of office supplies not chargeable to fixed assets accounts and the cost of such other items of materials and supplies used as food, beverages and supplies for establishment-operated cafeterias and lunch counters, first aid medical supplies, laboratory supplies etc.

Shipments

In general the figures represent revenue from all production, sales, services and related activities of reporting establishments. Non-operating revenues such as rent, interest and dividends and the sale of used fixed assets are excluded.

(a) Shipments of goods of own manufacture

These figures represent shipments of goods made from own materials either in the reporting establishments or by other manufacturers on the basis of a charge to the reporting establishments for work done. Included are revenue from repair and custom work, amounts received in payment for work done on materials owned by other establishments and the cost of any goods shipped on a rental basis.

All products and by-products of own manufacture shipped from the establishment are covered, including transfer shipments to sales outlets, distributing warehouses or to other manufacturing plants of the reporting firm when such units are treated as separate establishments. (See notes on "Establishment").

Such shipments are net of returned goods, and value figures at the establishment exclude discounts, returns, allowances, sales taxes and excise duties, returnable containers, and charges for outward transportation by common or contract carriers. Transportation or delivery expenses incurred by the reporting establishments' own carriers are not deducted.

The unsold portion, at year-end, of consignment shipments in Canada, is treated as inventory and not as shipments, but all shipments to foreign countries, for which form B.13 "Customs Canada, Export Entry" has been completed, are treated as shipments.

In four industries, viz. Fabricated Structural Metal Industry, Aircraft and Parts Manufacturers, Railroad Rolling Stock Industry and Shipbuilding and Repair, where work on principal products extends over a relatively long period, the value of production, rather than the value of shipments, is recorded. For these industries value of production is computed from the value of deliveries of complete units during the year plus the value of work done during the year on unfinished units less the value of work done in previous years on units delivered in the year under review. Adjustments to the value of shipments are also made for firms in these industries and in some other industries which operate on the basis of progress payments. The latter are treated as sales and not as inventory, so that for firms which use a progress payments account, an adjustment to the value of shipments is made for the net change in this account during the year.

(b) Shipments of goods not of own manufacture

These figures represent the net selling value at the establishment (less discounts, returns, allowances, sales taxes and excise duties and transportation charges by common or contract carriers) of all products or materials (including products transferred from other establishments of the reporting firm) sold as such in the same condition as purchased or received as transfers. For those industries which ship goods on a rental basis value of shipments represents the book value of such goods. All sales of consignment goods from other countries are included.

(c) Other revenue

Figures represent the book value of fixed assets, if any, (new construction and machinery and equipment including major repairs and alterations, additions, modifications, installation and assembly work) produced during the year for the use of reporting establishments by the establishments' own employees and for which depreciation accounts are maintained. Included also are any revenues from the sale of electricity and from any operations performed by the establishments' own employees, such as revenue from goods produced for rental (the book value of such goods are included as part of factory shipments), servicing revenues, commissions on sales (when not included in value of sales), revenue from company-operated cafeterias and lunch counters and revenue from outside installation or construction work not related to the establishments' own products, sale of used materials (excluding sale of used fixed assets), research and development work etc. As mentioned previously the figures do not include non-operating revenue such as rent, dividends, interest, etc.

Inventories

(a) Manufacturing inventory

Values represent the book value of manufacturing inventory owned in Canada. The value of inventory held for which progress payments have been received is treated as shipments and is not included in inventory owned. Figures consist of inventory owned at the plant and at warehouses or selling outlets which are treated as extensions of establishments for the purpose of reporting shipments. Inventory owned in transit in Canada or on consignment in Canada is included. Inventory owned abroad has already been reported as shipments and is excluded.

(b) Inventory of goods purchased for re-sale

Figures represent the book value of inventory of goods purchased for re-sale as such without further processing, owned by reporting establishments and held at the plants and at any warehouses or selling outlets which are treated as extensions of establishments. Inventory owned in transit in Canada or on consignment in Canada is included.

Because of changes in classification, the receipt of revised data, the inclusion of new establishments or the removal of old establishments which did not operate during the latest year, the opening inventory for the latest year does not necessarily coincide with the closing inventory of the preceding year.

Value Added

(a) By manufacturing activities

Figures are compiled by deducting the cost of materials and fuel and electricity consumed from the value of production (value of shipments adjusted for changes in the value of inventories of finished goods and goods in process).

(b) By total activities

Figures consist of value added by manufacturing activities plus value added by non-manufacturing activities and is compiled by deducting the cost of goods purchased for re-sale and the cost of other materials and supplies used from the value of shipments of goods not of own manufacture plus other revenue, adjusted for changes in the value of inventories of goods purchased for re-sale.

"Value added" is sometimes referred to as net production. However, to arrive at the National Accounts concept of net production, or "Gross domestic product at factor cost", it would be necessary to subtract also the cost of advertising, insurance and other business expenses which are not collected in the annual Census of Manufactures. "Value added" figures for the primary industries, manufacturing and construction are published in DBS publication Catalogue No. 61-202, Survey of Production.

Short Forms

Since 1949, in order to ease the reporting burden for smaller firms, a one-page short form has been used asking for only a limited amount of detail. For purposes of publication, missing data were estimated on the basis of appropriate ratios. Beginning with the 1959 census, the general limit for short forms was raised from \$50,000 (the limit used since 1949) to \$100,000 value of shipments and a new medium form was used. This form is a shortened version of the long form in that some of the general questions were pared down and the detailed lists of materials and products were limited to the more important items. The general limits for firms in this category were set at between \$100,000-\$500,000 value of shipments, but in the case of both the

short and medium forms there are lower cut-offs for a number of industries in which the smaller firms account for a larger share of total shipments.

Prior to 1961, the short form was limited to a question on the principal items of factory shipments. In the 1961 and 1962 censuses, in addition to the question on shipments of goods of own manufacture, general questions on employment and payroll and on total revenue were added on all short forms. The other elements of principal statistics, viz. value of materials, fuel and electricity and inventories, were estimated by using ratios based on the change in the value of shipments reported in 1961 and 1962. This was done to permit the complete compilation of basic industry statistics by industry and by geographic location. The proportions of the estimated data was generally less than 5 per cent of the total in each category of principal statistics.

Beginning with the 1963 census, general questions on total purchases of materials, fuel and electricity and on total inventory were added on the short forms. The two questions, however, were designed so that the data can be easily derived from respondents' regular accounting records. This will permit a complete tabulation of principal statistics without the necessity of estimating missing items and will result in increased accuracy for rural area statistics where small firms account for a relatively important part of industrial output.

The addition of extra questions on the short form in recent years has also permitted an increase in the cut-off limits for short forms in many industries. This has meant that many more firms are now receiving the short form instead of the long or medium form. It has also resulted in the withdrawal of the medium form in a number of industries, thus further simplifying collection and tabulation procedures.

STATISTICS CANADA LIBRARY
BIBLIOTHEQUE STATISTIQUE CANADA



1010660444

1962

MISCELLANEOUS MACHINERY AND EQUIPMENT MANUFACTURERS