

Eleven Canadian companies will take part in the Pakex 83 exhibition of packaging machinery and equipment to be held in Birmingham, England, April 25-29. These firms, leaders in their field, represent a broad cross-section of the packaging industries, and their products cover a wide range from labellers through carton sealers to bar code inspectors of pharmaceuticals.

The companies displaying their wares at the exhibition will be: Arpeco Engineering Limited, Mississauga, Ontario; Associated Packaging Equipment Corporation, Markham, Ontario; Delamere and Williams Company Limited, Toronto, Ontario; Hauser Machinery Limited, Scarborough, Ontario; Ideal Equipment Company Limited, Montreal, Quebec; H.J. Langen and Sons Limited, Mississauga, Ontario; Longford Equipment International Limited, Scarborough, Ontario; Rotoflex International Incorporated, Mississauga, Ontario; Stackpole Machinery Company, Scarborough; and Western Packaging Systems Limited, Richmond, British Columbia.

cent annually in real terms during the same period. While in 1965, 20 per cent of domestic production was exported, by 1981 this proportion had risen to close to 40 per cent.

Products

The varied range of capital goods produced by the machinery industry fall into three broad categories on the basis of its industrial end-uses:

- resource-based machinery, including agricultural, forestry, mining, power generation and construction equipment;
- plant and industrial machinery such as textile, plastics, rubberworking, packaging, etc. and general purpose industrial machinery including valves, compressors and materials handling equipment; and
- service industries machinery including commercial refrigeration and air conditioning equipment, heating equipment, food preparation and garage and service station equipment.

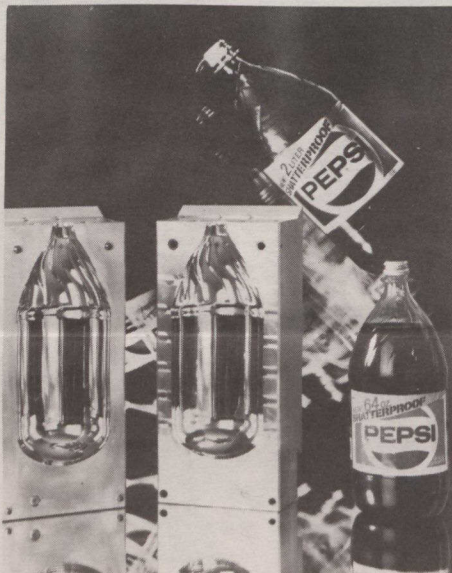
The resource and industrial sectors provide by far the greatest market for Canadian-made machinery and equipment. Of the industry's total production approximately 35 per cent consisted of resource-based machinery and about 40 per cent was for plant and industrial purposes. The remaining 25 per cent was for service industry machinery.

In order to remain competitive in markets characterized by a wide range of demands and a large number of suppliers, many machinery companies have gradually specialized their production and concentrated on custom-engineered equipment and certain types and sizes of standard machinery.

Specialization has, in a number of cases, been achieved through rationalization agreements whereby a Canadian subsidiary produces a line of machinery for the corporate group while rounding out its product lines with imports from

the parent organization. In other cases, companies have developed unique equipment capabilities which they have been able to market successfully in Canada and abroad.

Machinery industry activity is more heavily concentrated in central Canada, especially in parts of the provinces of Ontario and Quebec, than is the case for manufacturing industries as a whole. This is probably because the sector is relatively more dependent on large population centres for skilled labour, suppliers of inputs and proximity to most industrial and service industry markets. The histori-



What does a soft-drink bottle have in common with a detergent container? Chances are that moulds for both were made by a company located in Hamilton, Ontario and are now being used by many countries. All moulds are machined twice and engineered to meet the needs of several moulding operations. The extensive experience and reputation for excellent service have won the Canadian firm customers throughout North America, Europe, Africa and Asia.

cal pattern of industrial development in the country — of concentrating secondary manufacturing activities in central Canada — was reflected in the machinery sector.

Nevertheless, many small operations, such as machine shops and tool-and-die makers, are spread throughout the country to meet local requirements. There are also some regional centres of machinery industry activity that have developed close to concentrations of resource-based activities — e.g. agricultural implement production in Manitoba and Saskatchewan; oil and gas equipment in Alberta; fish processing equipment in the Atlantic provinces; and logging and sawmilling equipment in the province of British Columbia on Canada's Pacific coast.

Markets

The predominant characteristic of machinery markets is that they are international. Most industrialized countries have strong machinery producing capabilities and they compete extensively with each other for the broad range of machinery needs characteristic of developed economies. They also compete in third countries with little or no indigenous machinery production capabilities but which are rapidly evolving as important markets for machinery needed by the infrastructure and resource development projects underway.

The Canadian market is typical of that of other industrialized countries in that it encompasses a broad and diverse range of machinery needs. However, the demands for each type and size of machine are much lower in volume than is the case in a number of major machinery producing countries. The total domestic market for machinery and equipment in 1980 was approximately \$16.8 billion. Over-all domestic demand for machinery increased by close to 12 per cent a year in dollar terms from 1965 to 1970, expanding particularly rapidly from 1970 to 1980, even taking into account the large inflationary trends in the last few years.

The United States is Canada's largest machinery market, accounting for approximately 70 per cent of Canada's total exports. These exports are very diverse, covering practically every type of machinery produced in Canada. In addition to such factors as proximity and similarity of standards and business practices, an added stimulus to exports to the US is provided by the close working relationships between parent and subsidiary companies.

Western Europe, together with