

## Market for centrifuges has great potential in India

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*With India emerging as a leading vaccine producing hub in the world, the market for centrifuges has been increasing over the last few years.*

The encyclopedia defines centrifuge as a device using centrifugal force to separate two or more substances of different density, e.g., two liquids or a liquid and a solid. The centrifuge consists of a fixed base or frame and a rotating part in which the mixture is placed and then spun at high speed. Several stages of centrifuging are needed to effect the required degree of separation. It is an apparatus consisting essentially of a compartment spun about a central axis to separate contained materials of different specific gravities, or to separate colloidal particles suspended in a liquid. Centrifuges as stand-alone machines or integrated in complete process lines make possible the realization of new process techniques while at the same time making the production processes efficient and economical.

The first successful centrifuge was built in 1883 by Carl GP de Laval, a Swedish engineer, whose design was used chiefly for cream separators. The ultracentrifuge, devised in the 1920s by the Swedish chemist Theodor Svedberg, found wide application in scientific research. Using an optical system with it to observe sedimentation rates, Svedberg determined accurately the molecular weights of substances including proteins and viruses. Centrifuges are also used for such diverse purposes as simulating gravitational fields in space and for drying laundry.

There are many companies that have been manufacturing/ supplying various models of centrifuges to meet the needs of

different industries like biotechnology, life sciences, pharmaceuticals, chemicals and food, textiles. The range of centrifuges used for different applications include manufacture laboratory centrifuge, manual top discharge centrifuge, lifting bag type centrifuge, bottom discharge centrifuge and portable and detachable basket type centrifuge, high speed centrifuge filters.

In India there are more than 20 companies that are into manufacturing and supplying centrifuges. Companies like Jainsons (India), Zenith Glasswares and Instruments Corporation, Pawan Brothers, Chemo Fab Industries, PK Chemicals and Scientific Co. REMI Instruments Ltd, Sterling Manufacturing Company, are involved in the production of different types of laboratory scale centrifuges while Automed Systems, Axygen Scientific, Biocon Technologies, Biotech India, Genetix Biotech India, Imperial Biomedics, JH Bio Innovations, Medi Spec Instruments India Ltd, Shree Biocare India are into supplying centrifuges. In addition to manufacturing, AVExports and Biopro are also exporting centrifuges and micro centrifuge tubes respectively.

Ramakrishnan, marketing manager, REMI Sales & Engineering Ltd, an exclusive marketing arm REMI Instruments Ltd, one of the leading local manufacturers of centrifuges (refrigerated and non-refrigerated) with market share of 75 percent in certain range of centrifuges, said, "The market growth is about 20 percent. The price for small lab scale centrifuges varies from a few thousands to a few lakhs of rupees. The centrifuges are used in different industries and also in pathology labs, research and development centers and clinical labs. The centrifuges used in the R&D labs of biotech and life sciences industries will cost about Rs 1.5 to 4.5-lakh/ unit."

Arun Prakash, CEO, Genetix Biotech Asia Pvt Ltd, a supplier of a variety of centrifuges with other equipment to the life sciences industry, said, "The market for centrifuges has been growing at 30-35 percent. Besides distributors there are few manufacturers in India. The market for small laboratory centrifuges is about \$15-20 million. There are more than 20 players in this space with distributors having a major market share."

In addition to the local players, this market has the direct presence of multinationals like Sartorius, Thermo Electron Corporation, Alfa Laval and Westfalia Separator. Alfa Laval has a manufacturing unit at Pune while Westphalia Separator, a German company imports and supplies its range of centrifuges in India. These two firms are supplying high capacity and high-speed centrifuges for commercial production and pilot scale centrifuges. The first two are also supplying industrial centrifuges in addition to other range of centrifuges.

NK Singh, marketing manager, Westfalia Separator India Pvt Ltd, a 100 percent subsidiary of the German company Westfalia Separator and supplying centrifuges to the leading biotech companies in India, said, "The market for centrifuges is growing in the last few years. There is good potential for centrifuges in the country. However, the growth is slow as against the biotech industry's growth. And it is difficult to comment on the pricing, as the products/equipment are tailor-made that meet the needs of the different industries customers. On an average about 10-15 high end units used in commercial productions would be sold in year in India."

Sharing similar views, Prasanna Ghote, deputy general manager, life sciences - separation, Alfa Laval India Ltd, a leading provider of specialized products and engineered solutions including range of centrifuges, said, "We are mainly into the commercial and pilot scale centrifuge separator. The products are used in vaccine, insulin production. The market for centrifuges separation is growing very fast in the last few years than before. It is not a big volume market. I feel about 30 units of high-speed separators both SIP (sterilize in place) and non-SIP models would be sold in year in India. The price for high-speed centrifuge separators will vary from 400,000-one million euro."

Narayan Kulkarni