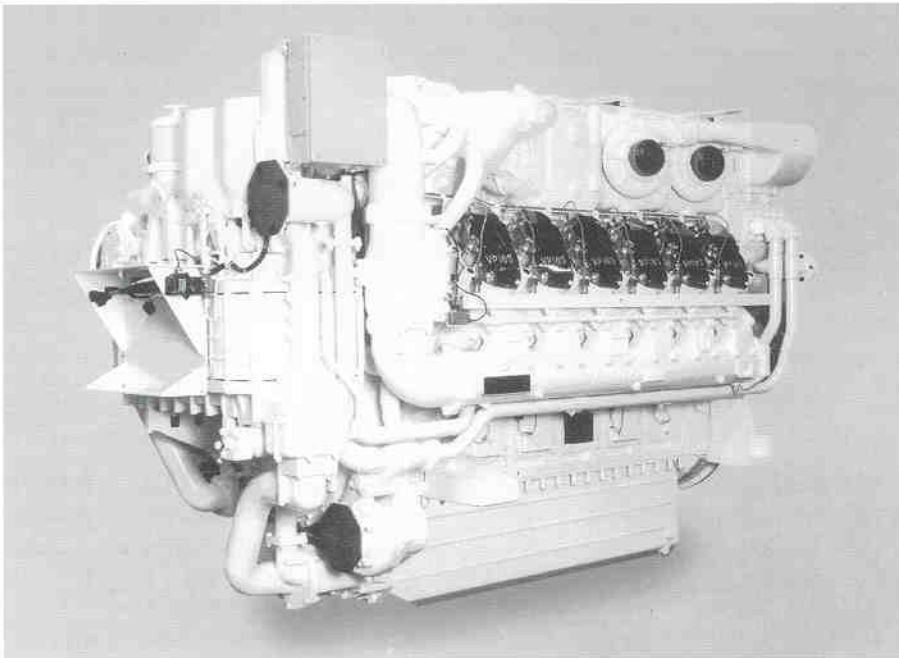


# PUMP OPTIONS

PUMPING EXPERTISE FROM ALBANY ENGINEERING

Issue 2



## COMPACT PUMP DESIGN MEETS UPDATED SPEC

During design of their 12VP185, a new diesel engine for railway traction, GEC Alsthom Paxman Diesels of Colchester, Essex identified the need for a more compact auxiliary oil pump. The company had previously used motor-driven screw pumps to provide oil lubrication before and during starting.

Albany Engineering has supplied auxiliary oil pumps for Paxman marine and industrial engines for a number of years. Accordingly, a copy of the new specification was sent to Lydney, with a request for recommendations.

The requirement not only covered a

physically smaller pump than previously used, but also an exacting temperature and viscosity range. Albany's answer was to source a DC motor with a specially-extended drive shaft and mount a Type VP gear pump directly onto its face.

GEC Alsthom Diesels Ltd. has now standardised on the Albany VP pump, fitted to a variety of styles of motor, for marine, industrial and railway applications. The first production pumps delivered were fitted to Paxman Valenta engines destined for diesel/electric locomotives in service with Sri Lanka Government Railways.

## FAST DELIVERY HELPS BURNT-OUT CUSTOMER

Fast response by Albany's Barclay Kellett subsidiary - which builds Stanhope and Crown pumps as well as its own ranges - recently helped a Bradford firm restart production quickly after a serious fire.

Disaster struck the customer, a manufacturer of metallic fastenings for the motor industry, when an oil heat treatment line was gutted by fire. The company quickly redesigned the process to prevent a recurrence, but urgently needed nine large

gear pumps to get the factory working again.

They rang stockist Essex Pumps of Sheffield, one of Barclay Kellett's major customers, who had nothing suitable on the shelf, but knew where to turn. Barclay Kellett was asked to build a batch of Stanhope HF8 and FL5 pumps as quickly as possible.

Four days later the bareshaft pumps were delivered to Essex, who added baseplates and motor drives. The finished pumps were delivered in less than a week from order.

## OLD CAMPAIGNERS FIND NEW LIFE IN THE NORTH

Up to 20 years after their installation at the Norwich works of Rowntree's Chocolates, rotary gear pumps supplied by Barclay Kellett of Bradford have been taken out of service. Fit for many more years of operation, they are being re-installed at Nestle's York, Halifax and Newcastle factories.

Barclay Kellett, a member of the Albany Engineering Group, builds Type 8T gear pumps especially for pumping molten chocolate mass and cocoa butter. A jacketed, hot water-heated design in stainless steel or cast iron, they have product-lubricated bearings and packed glands. Chocolate mass pumps, in addition, have a self-cleaning, scroll shaft design which continuously directs product in towards the gears.

The 8T has been the chocolate industry's mainstay for two decades. Its simple design and slow speed operation - it will operate down to 20 RPM - contributes to a notably long service life and low maintenance.

Confectionery industry engineers agree that the 8T gives a lower whole life cost than imported screw pumps. Fox's Biscuits at Batley have become the latest user, now with several pumps in service, while a spokesman for Payne's Poppets said: "The BK pumps definitely give better service than the imported chocolate pumps we used to use".



## ROYAL RETURN

A 1.5in AP8 gear pump was recently dispatched to Spain, for installation on the MV Fortuna, Royal Yacht of His Majesty King Juan Carlos. It replaces a similar unit, supplied by Albany in 1978 to pump seawater in the cooling circuit of one of the vessel's W.H. Allen diesel engines.

# PACKAGED DOSING FOR CHICKEN FEED MILLS

Working together with a specialist in animal feed plant, Albany Engineering has developed an accurate and economic dosing system for volumes as low as 0.7 l/min of a high value ingredient.

The customer, Novus UK Ltd. of Cirencester, supplies producers of poultry feeds with 'Alimet', a liquid supplement

containing methonine. It also installs dosing systems for the costly additive, which must be dispensed with great accuracy.

Novus wanted the dosing pump supplied as a package including the storage system, pipework, metering, control devices and computer interfaces. Albany turned to Pipe Systems of Horsham, experts in animal feed

plant, a company with which it had co-operated before.

Albany was able to save 40% on the cost of the pump previously used by adapting a cost-effective Stanwin stainless steel gear pump for the duty. This features four-bolt fastening for easy servicing, self-lubricating bearings, 'O'-ring face seals and mechanical shaft seal.

After the successful trial installation, Novus standardised on the Albany/Pipe Systems dosing system and is now discussing future developments of the design.

## CUTTING ANSWER

Albany's expertise in handling difficult fluids has solved a design problem for Heathway Ltd., a specialist lathe manufacturer based near Milton Keynes. A large lathe designed to grind glass and quartz for the fibre optic industry needed a cooling water feed to the cutting head. However, this required pumping of a very abrasive suspension of glass particles in water.

Knowing Albany's reputation for pumping problem fluids, Heathway asked the company to come up with a solution.

The answer lay in Albany's Crown, semi-submersible centrifugal pump, which incorporates a unique, tapered shaft feature which eliminates internal bearings. This prevents wear from the glass debris which would destroy a conventional pump.

Albany was able to design a coolant circuit which delivered the water to the cutting head, then recovered it from the lathe bed and filtered it for re-use. The tank and collection system were manufactured in a new fabrication shop established at Albany's Joseph Street works in Bradford.

## TANKER TOILERS

Compact, lightweight Albany pumps have met a stringent specification and helped to improve the utilisation of molasses road tankers for Intermol, a Cargill subsidiary. A one tonne per minute delivery was demanded from the pumps, which also had to meet size and weight constraints.

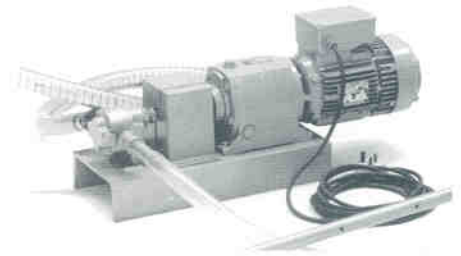
The type of stainless steel lobe pump previously used would have been too heavy and too expensive in the size to cope with the duty. However, the 4in branch-size of Albany's HD10 aluminium-bodied gear pump met all requirements.

On the tankers, the pumps are hydraulically driven to give pumping rates ranging from high, for delivery to bulk storage, to metered dispensing at farms. The efficiency of the Albany solution means that tankers spend less time in the depot and are able to make more deliveries per day.

Albany pumps are suitable for all types and viscosities of molasses - particularly blackstrap. Portable petrol or diesel engine-driven versions are also regularly supplied.

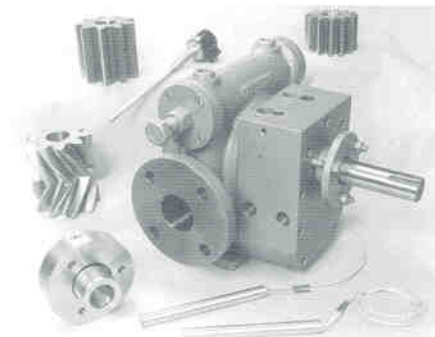
## WORK OF ART

An art gallery is one of the less likely places to find an industrial pump. However, an Albany 1/2in AP4 gear pump, similar to the one shown above, was used to power one of the exhibits in a recent show at the Tate Gallery Liverpool. The piece, by Bolton-born Janet Hodgson, contrasted a 2m cube of



white sugar with a constant trickle of black molasses - the residue from sugar refining - from the ceiling into a tray. Albany achieved the variable, low flow required by the artist by running the pump at 112 revs/min, with a screw-down valve on the delivery, governed by a relief-valve return to the molasses drum.

## MODULAR PUMP RUNS QUIETLY



Relief valves are fitted, while a special mechanical seal minimises seepage and incorporates a thermostatic trip which will inhibit pump starting if bitumen temperature is too low. The seal can be removed without dismantling pipework, for easy in-situ servicing.

The new design has a cast iron body, with cast steel as a high temperature option. Electric cartridge heaters are fitted as standard, with alternative connections available for steam or thermal oil heating.

Development of the well-established Albany range of helical rotor, heated bitumen pumps, has produced a new generation of quieter, smoother, leak free pumps, with applications also in handling rosin and wax.

The new HD, and lower capacity AP ranges, are designed for quick assembly to specific requirements. Parts are interchangeable through the range, allowing common spares holding.

Pump capacities are from 200 - 1200 l/min at temperatures up to 220°C, with branch sizes from 1.5in to 6in.

An advanced design of double helical rotor has reduced both hydraulic and mechanical noise. In addition, bellows mounting of the inlet and outlet connections allows pipework expansion and eases pipe alignment.

## SPECIAL VARIANT SHIFTS SLURRY

Albany's skill in handling problem fluids came in useful when pump breakdowns hit a York-based distiller of hydrocarbon products. A competitor's centrifugal pumps were proving unable to handle 'column bottoms' a slurry containing hydrocarbon residues and solvents, collected from fractionating columns.

Albany was asked by Essex Pumps of Sheffield to provide a cost-effective solution. A magnetic coupling pump was one possible solution, but the lower cost answer proved to be a variant of the AP11 gear pump with a special, grease-lubricated remote thrust bearing, at little more than the cost of a standard pump.