

STERLING

STERLING*combitube* - Low flow, high head



STERLING FLUID SYSTEMS GROUP

PITOT TUBE - SERVING INDUSTRY

The Combitube has been developed for 'low-flow, high-pressure' applications. Because of its mode of operation, the pump has a pulsation free flow and stable hydraulics. The very low minimum flow makes the pump suitable for all kinds of applications where operation up and down the curve is required.

END USES AND APPLICATIONS:

The Combitube is sold in industries where 'low-flow, high-pressure' applications are required e.g.:

- Chemical and Petro-Chemical
- Plastic and Rubber processing
- Pulp and Paper production
- Steel Mills
- Desalination/Water treatment plants (using reverse osmosis)
- Food processing

Applications in these end uses include:

- Cleaning
- Descaling
- Injection
- Boiler-feed
- Transport duties
- Pressurising hydraulic systems
- Spraying systems
- Process duties

HOW DOES THE COMBITUBE OPERATE?

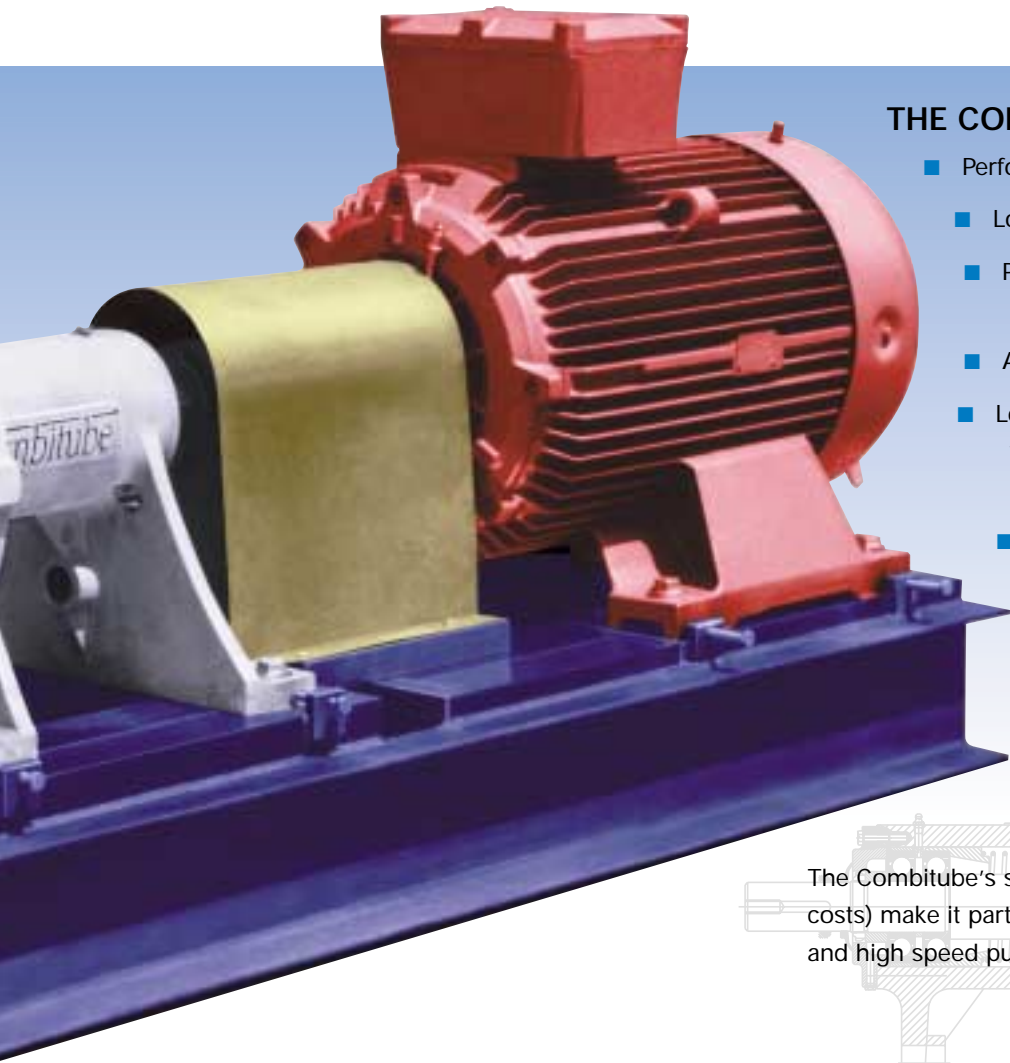
Liquid enters the pump via the suction line of the specially designed, interchangeable distribution manifold, passes the mechanical seal (the mechanical seal is only under suction pressure) and enters the rotor cover where it is accelerated to a speed identical to the rotor speed.

The liquid ring travels at the same peripheral speed as the rotor and this moving fluid has a velocity head.

A stationary, wing-shaped Pitot tube is placed inside the rotor and has a circular

opening located close to the inside of the rotor. The Pitot tube works in two ways: firstly, the liquid enters the Pitot tube at high velocity under the centrifugal pressure created by the rotor and secondly, much of the high velocity energy is converted into pressure as the liquid passes along the diffuser section of the Pitot tube. Using this operating principle, relatively high pressure can be obtained in a single stage process. The pump generates a pulsation free flow and has a stable NPSHR curve.

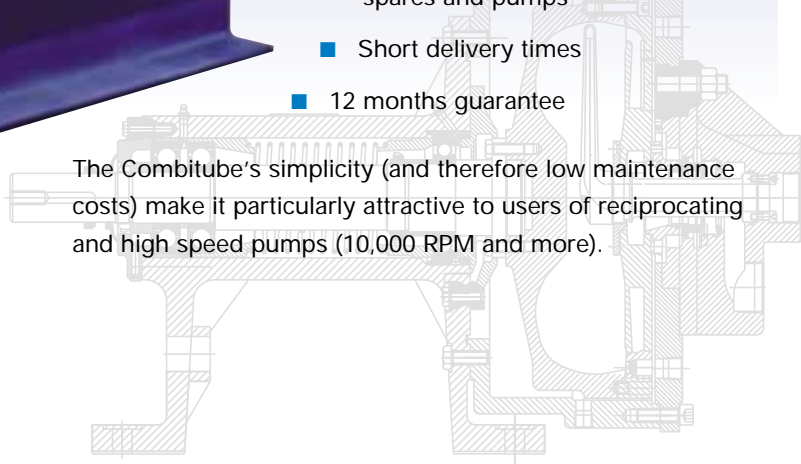




THE COMBITUBE OFFERS:

- Performance versatility, wide operating range
- Low stable NPSHR values
- Pulsation free flow (up to 160 bar, 105m³/hr) (up to 2320 PSIG, 460 USgpm)
- Available in a range of materials
- Low maintenance costs (compared with reciprocating pumps and high speed pumps)
- Relatively low investment costs (compared with high speed pumps and multistage pumps)
- Maximum interchangeability of spares and pumps
 - Short delivery times
 - 12 months guarantee

The Combitube's simplicity (and therefore low maintenance costs) make it particularly attractive to users of reciprocating and high speed pumps (10,000 RPM and more).



SPECIFICATIONS:

PUMP TYPE	CWHA	CWHG	CWHB
Capacity max.	105 m ³ /h / 460 USgpm	100 m ³ /h / 440 USgpm	35 m ³ /h / 154 USgpm
Delivery head max.	1900 m / 6300 Feet	765 m / 2500 Feet	450 m / 1476 Feet
Pump speed max.	6800 RPM	4380 RPM	4860 RPM
Temperature	400 °C / 750 °F	120 °C / 250 °F	120 °C / 250 °F
Casing pressure	160 bar / 2320 PSIG	85 bar / 1230 PSIG	55 bar / 800 PSIG
Lubrication	oil	grease	oil



LOCAL SERVICE NETWORK - SUPPORTED GLOBALLY

Wherever you operate in the world, you can be sure the very best support is within easy reach. With more than 200 Sterling Service support operations established throughout Europe, the Middle East, North and South America and Asia, we guarantee exceptional and prompt service from our local support network.

