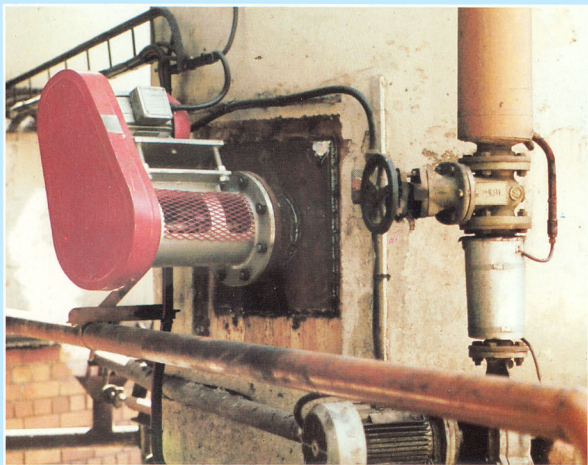


Mixertech Limited



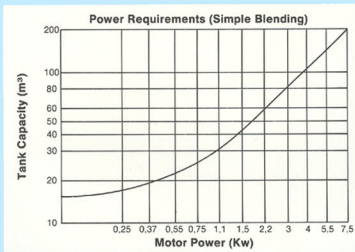
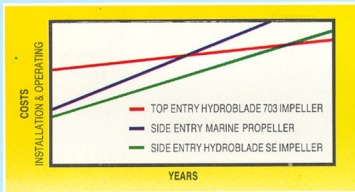
BLENDING
WITH
SIDE ENTRY
MIXERS

ECONOMICS OF SIDE ENTRY MIXERS

When considering whether to install a top or side entry mixer on a large blending tank, such as petroleum, lubricating oils, fuel and vegetable oils, the process engineer should carefully select the equipment required to perform the duty. For example, a top entry mixer requires a long shaft and large heavy impeller combined with a suitable heavy duty gearbox to carry the forces generated when mixing. It also requires a mounting structure to carry this additional mass on the tank top. In-tank structures, like anti-vortexing baffles, are normally required. Maintenance and access platforms have to be constructed as well. All these factors add together to make the top entry mixer expensive to install.

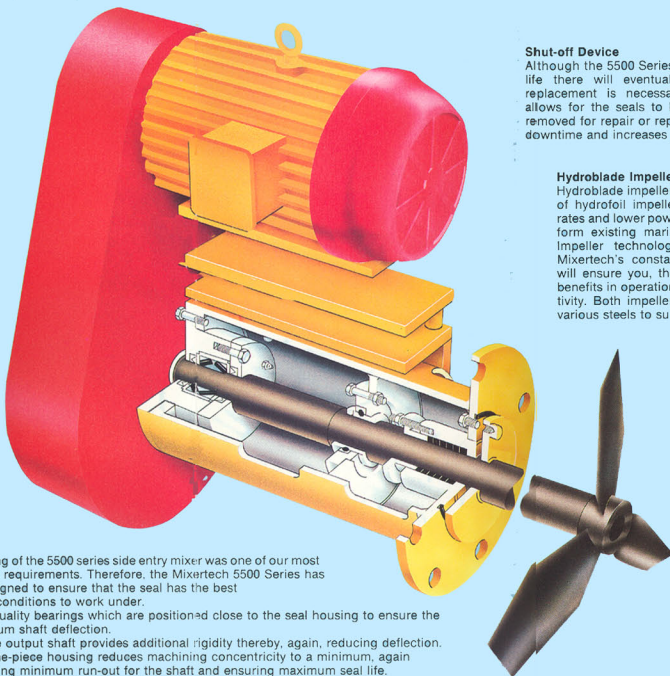
The side entry mixer, however, operates close to the bottom of the tank with a shorter, lighter shaft. The impeller is smaller and being positioned near to the bottom of the tank it thereby generates the maximum flow where it is required. Being close to the bottom of the tank also means easy access for installation and maintenance. By positioning the mixer on a suitable manhole, mounting costs can be kept to a minimum and by correctly off-setting the mixer, no additional in-tank baffles or anti-vortexing structures are required.

Mixertech have had years of experience in both top and side entry mixer designs and we can advise you on your best method of mixing in large tanks.



SERIES 5500

The simple compact design of the Mixertech Series 5500 side entry mixer combines light mass with structural rigidity. This compact design reduces the bending moment on the tank thus eliminating the need for any further support structures, however, should additional support be required, as in the case of light gauge tanks, this can be provided by tie rods or leg supports. The one-piece housing also ensures maximum shaft concentricity which improves seal life.



Standard Motors

IP55 TEFC 4 pole motors are fitted, which are hose proof from any direction, as standard other motor enclosures are also available to suit your duty.

Belt Drive

The Belt Drive is a simple, reliable method of transmitting power which also gives the ability to vary the output speed so that when process conditions change then so can the mixer.

Shut-off Device

Although the 5500 Series is designed for maximum seal life there will eventually come a time when seal replacement is necessary. The seal shut-off device allows for the seals to be isolated from the tank and removed for repair or replacement. This feature reduces downtime and increases productivity.

Hydroblade Impellers

Hydroblade impellers are the very latest generation of hydrofoil impellers which maximise high flow rates and lower power consumptions. They out-perform existing marine-type props. by 25 to 50%. Impeller technology is constantly improving - Mixertech's constant research and development will ensure you, the customer, get the maximum benefits in operational efficiency and plant productivity. Both impeller and shafting are available in various steels to suit your application.

Seals

The sealing of the 5500 series side entry mixer was one of our most important requirements. Therefore, the Mixertech 5500 Series has been designed to ensure that the seal has the best possible conditions to work under.

1. High quality bearings which are positioned close to the seal housing to ensure the minimum shaft deflection.
2. A large output shaft provides additional rigidity thereby, again, reducing deflection.
3. The one-piece housing reduces machining concentricity to a minimum, again providing minimum run-out for the shaft and ensuring maximum seal life.
4. The shut-off device also acts as a finger which maintains liquid flow around the seal taking away heat and preventing the build-up of solids.

A wide variety of seals are available which ensures the best possible selection for the job.

Heavy Duty Bearings

These are high quality anti-friction bearings which support the shaft thus ensuring minimum run-out and a long operating life of the seal. By using sealed-for-life bearings, maintenance is reduced to a minimum.

MIXERTECH SIDE ENTRY MIXER RANGE



5100
Industrial side entry unit
suitable for 0.37 - 5.5 Kw.
Applications include general blending oils,
waxes and chemicals.

5150
Food duty version of 5100.
Applications wine, milk, sugar,
high quality food and pharmaceutical applications.

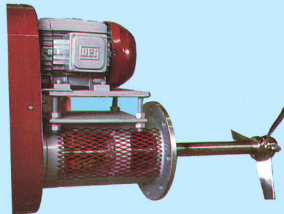


All units are capable of being cleaned in place (CIP) and all electrical motors are completely hose and weather-proof, allowing the units to be washed without special protection.

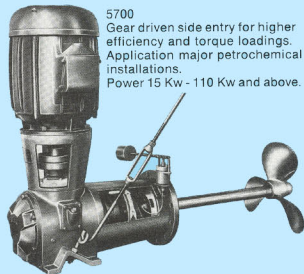
Special precautions taken to ensure that no crevices are present and that maintenance is reduced to a minimum by using pre-greased bearings and gear, which positively seal against leakage. The standard finish of 180 grit on 316 stainless steel parts combined with food duty mechanical seals ensure an hygienic finish.



5300
Compact design for
limited space.
Applications general
chemical and flameproof
petrochemical duties.
From 1.5 Kw - 15 Kw.



5500
Belt driven general purpose side entry for heavy
chemical, fuel, oil, petrochemical, paper and pulp.
Application from 3.0 Kw up to 37 Kw.



5700
Gear driven side entry for higher
efficiency and torque loadings.
Application major petrochemical
installations.
Power 15 Kw - 110 Kw and above.



5900
Extra heavy duty for
low speed side and
bottom entry mixing.
Applications for
polymerization,
reactors, large crude
oil storage, pulp and
paper.

DUTIES

MILK STORAGE

Mixertech Series 5150 side entry mixer, used in both horizontal and vertical tanks, of capacities from 2000 litres to 200 cubic metres, provide low shear high flow rate mixing to ensure that the required duty is performed without damage to the milk.

WINE

Mixertech Series 5150 side entry mixer provides the optimum combination of design simplicity and impeller sophistication. Manufactured to the most hygienic standards the Mixertech range caters for tank capacities from 2 - 1000 m³.

SUGAR

For sugar dissolution only vertical tanks, concave or dished ends, should be used. Applications for Mixertech 5100 Series not only include conventional sugar syrup and sugar dissolution but have also been applied in suspension of fruit particles, achieved using the HA703 high flow low shear impeller, where low tip speeds are required, and special precautions need to be taken to ensure that air is not introduced into the system.

HEAT TRANSFER

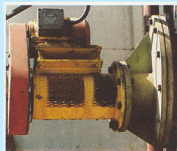
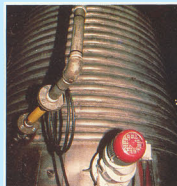
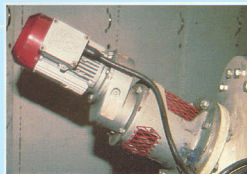
Mixertech side entry drive and impeller system combined low mass and simple mounting to minimise high bending and torsional loads on the tank shell. In large storage tanks, the rate of heat transfer and temperature control of the process is improved by producing a uniform flow and high turbulence in the vessel.

PULP & PAPER

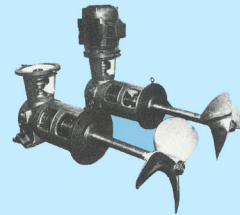
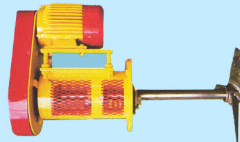
In this application special attention is required to ensure that the stock is correctly mixed. To ensure maximum process efficiency, our application engineers, aided by computer programming are practiced in the complicated calculations required to suit paper and pulp duties.

OTHER BLENDING APPLICATIONS

Our experience includes the blending, using side entry mixers, of sunflower oils for the manufacture of margarine, soap, edible oils, shortenings, (including the blending of coconut oil, cotton seeds, corn oil and soya bean), as well as pharmaceutical, brewing, distilling and cosmetic applications for tank capacities up to 400 m³.



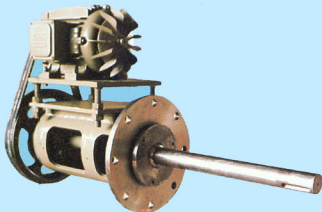
PETROCHEMICAL & MINERAL OILS
In the Petrochemical industry, the introduction of the HA700 and HA703 hydroblade impellers, in conjunction with the Mixertech 5500 side entry drive, have greatly increased performance, efficiency and economy in large tank blending applications.



QUALITY ASSURANCE

It is pointless designing the best possible mixer if it is not backed by the best possible manufacturing techniques.

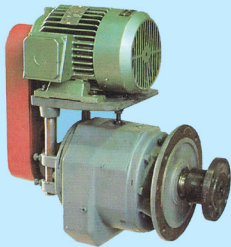
The Mixertech Series 5000, like all Mixertech equipment, is manufactured to the highest industrial standards.



EXPERIENCE

One of the most important considerations when buying a side entry mixer is knowing that it will do the job - and carry on doing it for a long time - others talk about it - we guarantee it. The experience of our application engineers ensures the correct design to do the duty you have specified. The design features and methods of construction will ensure it keeps on doing it. Each unit comes with a **double** guarantee.

We guarantee that it will do the job and we guarantee it will keep on doing it.



RESEARCH & DEVELOPMENT

Mixertech have a constant research and development programme which assures you have the best possible combination of technology and price.

Value for money is the basis of this programme, and our aim is to continue to find better and more cost effective methods of mixing and manufacture.



Mixertech Limited

FOR MIXING TECHNOLOGY

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