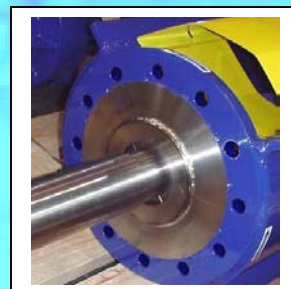






SHARPE





MIXERS 101







Motors- Primary purpose: Transmit power and torque to the mixers.



| Mounting | Description | Motor/Gearbox/Coupling |
|---|--|---|
|  | C-Face Motors Standard on most mixers. Mounts directly on gearbox C-Face input. Registered fit. Easy to install. Available off the shelf for most motor enclosures. Can be mounted vertical or horizontal. Connects to the gearbox via motor coupling. |  |
|  | Foot Mounted Motors Mounts to gearbox with a motor scoop. Used for high horsepower (20 hp and above) or when a C-Face motor is not available. Connect to gearbox with flexible motor coupling. (Standard on V-Belt drives). |  |

| TEFC | Mill & Chem. Duty | Washdown Duty | Stainless Steel |
|--|--|--|---|
|  |  |  |  |
| Totally Enclosed Fan Cooled motors are designed for "General Purpose" operation. Available in 1 phase and 3 phase power. Horsepower range of 1/8 HP through 150 HP. 1750 rpm standard. | Chemical Processing motors are designed for applications requiring protection of the motors for severe operating conditions. | Applications include food processing, packaging, pharmaceuticals, or applications where motors are regularly exposed to high pressure wash down. | All Stainless-Steel motors (Paint Free) Meet all of the requirements of Washdown Duty with a stainless steel enclosure. |

| Premium Efficient | Explosion Proof | DC Motor | Air Motor |
|---|--|---|--|
|  |  |  |  |
| Premium Efficient Motors are designed to conserve energy and reduce operating costs. All three phase motors are Inverter Ready. | XP motors are used in a wide variety of applications where hazardous fumes or dust may be present. The customer must define area classification. | Permanent magnet motor. Variable speed requires SCR controller. Standard 90 or 180 Volt DC power. Available in TEFC, XP and washdown enclosure. | Air motors are good combination of speed control and cost. Operating costs are higher when compared to electric motor. Recommend filter/lube kit |

Variable Speed Drives Primary purpose: Control the speed of the motor

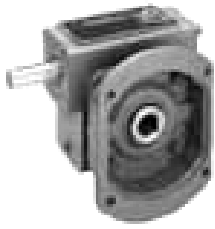


| AC Controller - 1 Phase (VFD) | AC Controller - 3 Phase (VFD) | DC Control - 1ph (SCR) |
|---|--|---|
|  |  |  |
| ¼ to 1 hp. The VFD Drive is a variable speed control in a NEMA-4X washdown enclosure. It is designed for 1ph, 110/220-volt input and to work with 208-230 Volt 3ph "inverter ready" motors. Easy to install and operate. The drive can be mounted directly to motor or tank sidewall. | 1 hp to 20 hp. Adjustable speed Inverter control for AC motor. Washdown duty NEMA 4X/12 enclosures. Designed to work with 3-phase inverter ready motors. Includes digital display, push button control and programming. Wall or tank mounted. 3 phase input. Many options available. | SCR controls are designed to operate with DC motors. Available in Nema 4x washdown duty enclosure. ¼ hp to 3 hp. Due to its small compact design; the drive can be mounted directly to motor. Single-phase input. |

Gearbox (Speed Reducer) Primary purpose: Reduce or Increase output shaft speed.

Output Shaft Options

Hollow Bore



Hollow bore gearboxes are the most common and cost-effective way to install a mixer shaft onto a gearbox. The shaft slides up in the drive without the need for shaft coupling. Preferred when using any type of tank seal.

Solid Shaft



Solid output shafts allow the maximum gearbox shaft size. Requires a flanged or split style coupling to mount mixer shaft.

Gearbox Type

E-Series



Description

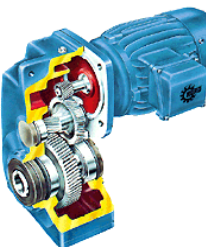
Right Angle Worm Drives

The Sharpe Mixers' compact E-Series worm gear drive is a very versatile hollow bore unit that is typically used in 1/3 to 5 hp range with output speeds of 5 to 350 rpm. The low profile right angle design can be tailored to meet most top entry and side entry mixing applications up to 10,000 gallons. Ring base, plate or flange mounted For open or closed tank applications. Available in standard corrosion resistant epoxy coated unit, white washdown unit or all stainless steel construction. (Reasonably priced).

Options



N-Series



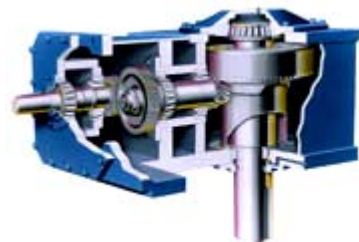
Double Helical Parallel Shaft

The Sharpe Mixers N-Series is an in-line helical drive with a wide range of options. The units are available in hollow or solid output shafts, up to 50 different ratios per case size and typically used in 1-to-150 hp range. Built with heavy duty tapered roller bearings and Quadrilip Seals on the output shaft. Designed for use in top entry, side entry open and closed tanks. Available with optional leak safe "Effective Drywell" (shown right) designed to prevent the gearbox lubricant from contaminating the mixing medium. Vertical motor assembly. High quality for reasonable prices.

Oil Safe Design



R-Series



Heavy Duty RAM drives

Sharpe Mixers R-Series is a right angle helical-spiral-bevel drive designed to handle the most demanding requirements of mixing applications. 5-300 Horse Power. Typically used in high torque, large tank applications. Unit includes drywell and oversized drive components. Heavy Duty-Expensive



Mounting Options Primary purpose: Mount mixer to tank



| Ring Base | Plate Mount | Flange Mount | Ferrule Mount |
|--|--|---|--|
| | | | |
| Ring base mounting is standard on E-Series unit. Mounts on beams or supports | Plate mount on tank beams is standard for open tanks. (N and R Series) 10° riser also shown. | Flange mounting is typical for closed tanks with a shaft seal. Meets standard ANSI Flange Dimensions. | Ferrule clamp mounting is often used in sanitary applications. |

Gearbox Shaft Mounting Options Primary purpose: Mount Shaft to gearbox

| Flanged Gearbox Coupling | Split Coupling | Hollow Bore drive stub |
|--|--|---|
| | | |
| Flanged couplings are used on solid output shaft gearboxes. Couplings are registered for exact alignment with mating shaft coupling. | Split Couplings are used on gearboxes with solid output shafts and mixers with a mechanical seals. Coupling allows for seal removal with out removing gearbox. | Upper shaft of mixer shaft machined to fit into hollow bore gearbox. Held in place by a keeper plate and bolt. Typical for most mixers. |

In-Tank Shaft and Options Primary purpose: connect lower and upper shafts

| In-Tank Couplings | Threaded Coupling | Shafts |
|---|--|---|
| | | |
| Shaft In-Tank couplings are used to separate the shaft into more manageable lengths. Common for long shafts or when space is limited. | Sanitary Threaded couplings are typically used in Pharmaceutical or Food applications. Used on longer shafts when all welded impellers are required. | Pipe shafts. Lightweight & strong. Available in 20' sections. Used with Split impellers. Solid shafts Small shafts (<2.5") less than 12 feet long. |

Steady Bearings Primary purpose: Support long shafts








| Standard Tripod | Vertically Adjustable | Sanitary Steady Bearing |
|--|--|--|
| | | |
| Three Leg steady bearing with optional wear sleeve. For use with long shafts | Pipe Leg steady bearings are an optional heavy-duty design. The legs can be adjusted vertically. | Sanitary easy clean steady bearing. Polished stainless steel and UHMWPE Plastic. |

Seal Options Primary purpose: hold pressure and liquid in the tank

| Excluder Seal | Dust Cup | Vapor Seal | Low Pressure | High Pressure |
|--|---|---|---|---|
|  |  |  |  |  |
| Simple cost effective design. Keep debris out of flat top tanks. Made of Buna or Viton Rubber. | Dust cups are made of UHMW Plastic and an O-ring. Basic splash-guard design to fit on top of tank nozzle. | Flange mount Vapor Seal. Designed with two Buna or Viton Rubber lip seals. 1-2psi rated | Low Pressure 2-Ring packed glands (stuffing boxes) are designed for 15psi. Flanged mount units.  | High Pressure 7-ring packed glands are design for up to 150psi. Usually non-Sanitary applications. Flange mounted units.  |






| Single Seal | Dry Running | Split Seal | Double Seal | Lubricator |
|---|---|--|--|--|
|  |  |  |  |  |
| Single seals are for closed tanks with moderate pressures and temperature. Many options available, for wet and dry operation. | Dry running seals require no external lubrication. Available with Sanitary debris well and C.I.P. flush port design. Common for food and Pharmaceutical applications. | Split Mechanical seals are a two-piece seals that are easy to install and service. Compact design does not require coupling. | Double "UniMech" Seals for high temp & press. applications. Adjacent bearing minimizes shaft run out. Designed to be serviced without disturbing drive/shaft assembly. Also available in cartridge design. | Lubrication Reservoirs are used to lubricate and cool mechanical seals. Piped to seal. |






Impeller Mounting Options Primary purpose: Install impeller onto mixer shaft


| 1-Piece Hub | Split clamp-on Hub | Split Sanitary | All Welded | Bolted Blade |
|---|--|--|---|---|
|  |  |  |  |  |
| 1-piece impeller attaches to solid shaft with setscrews. Optional keyway. | Clamps onto the shaft. Easy to adjust & remove. Fits thru manway. Optional Keyway or locking torque pin. | Includes O-Rings and Gaskets at split. May be polished for sanitary use. | Used for polished sanitary use or coatings. (Rubber /Halar) | Bolt-on blades are used for exotic alloys, titanium, hastelloy etc. |

Impeller Options Primary purpose: Pump liquid

SHARPE
MIXERS

| Prop 1.0 | HYF-218 | HYF-518 | AFT-455 | FBT-700 |
|--|---|---|---|--|
|  |  |  |  |  |
| Standard 3-Blade Propellers are designed for small diameter high-speed applications. | Sharpe Mixers most popular Hydrofoil style impeller. Generates the most flow for the least amount of power. Reduces operating costs. Improves performance. Max viscosity of 5000 cps. | Hydrofoil-blade impeller designed for higher viscosity applications. More flow, less power. | Flat Blade Axial Flow Turbines are typically 45° pitched blade. Used in Higher 5,000 – 50,000 cps viscosity mixing. | Four 90° blades. Radial flow impellers are typically used as "ticklers" to agitate the bottom of a tank. |

| RDT-710 | CBD- 730 | HSD-800 | Folding AFT-455 | Stabilizer Ring |
|---|---|---|---|---|
|  |  |  |  |  |
| "Rushton" disk radials are used for high shear & gas dispersion. | "Cup" Blade Disk Radial used for gas dispersion. | High-speed impeller designed for very high shear, at high speeds. | Folding impellers for use on mixers that don't have manway access or small openings that don't allow maintenance. | Stabilizer rings or fins are used to help stabilize longer shafts. |

| Anchor | Anchor/Scraper | Double Helix | Coatings | Polishing |
|---|--|---|--|---|
|  |  |  |  |  |
| Anchor style impellers are used for high viscosity applications. Slow speeds. | Sweeper style anchor impellers are used for "sweeping" walls of heated tanks with high viscosity products. | Helix style impellers used for blending & heat transfer of high viscosity product | Coatings are used for chemical or abrasion resistance. Rubber, Halar, FRP, etc. All welded assembly. | Mechanical polishing and electro-polishing. Used for sanitary applications. |

Other Options

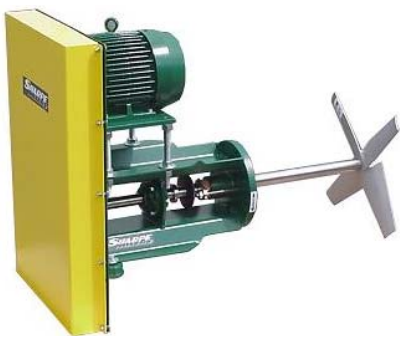
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MIXERS

| Lab Testing | PB Mixer | Balancing | Technical/Field Service |
|---|---|---|---|
|  |  |  |  |

Side Entry Belt Drive Mixers Primary purpose: Mixing

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MIXERS

V-Series



Side-Entering

Sharpe Mixers V-SERIES
The simplicity of SHARPE'S V-Belt mixers provides distinct advantages over other mixer designs in installation, operation and maintenance. Where downtime is a problem, no other mixer is as dependable, or as easily serviced.

Guards/drain ass'y



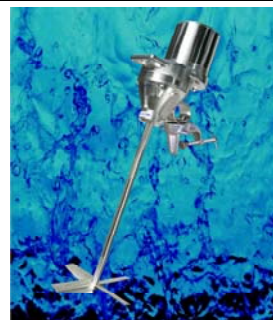
Dual Bearings



Portable Mixers Primary purpose: Clamp mount or Fix mounted Mixers

SHARPE
MIXERS

G-Series SSG-100 and G-050



Gear drive Clamp mount All stainless steel or standard portable mixers. Universal design

D-Series



Direct drive mixer with clamp mounting

F-Series (FGL)



Gear Drive mixer with Low pressure seal housing

F-Series (SSFDP)



Direct drive All stainless plate mounted mixer

Mounting Options for F-Series mixers.

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MIXERS

Clamp Mount



Stainless Steel C-Clamps to side of tank, beam or stand.

Cup Plate



Cup plate mounts to tank beams or tank support.

Plate Mount

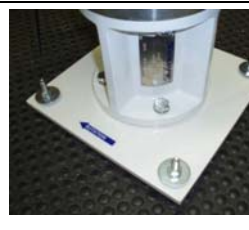


Plate mounts for open tank tops with support beams.

Angle Riser



10° Angle riser for tanks without baffles. Double offset recommended

Flange Mounted



Flange mount Vapor seal shown. Typical 2.5", 5" and 6" flanges on Portables

Ferrule Mount



Sanitary mount for closed tanks.

Seal Pedestal



Flanged pedestal housing for seals

Barrel Mount



2"NPT Bung Adapter

Tote Bin Mount



Tote Bin mount with three holes


Side Entry





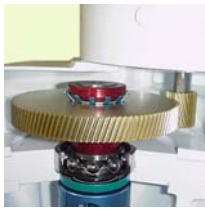


Side Entry Gear Drive unit Mixers

Portable Options Primary purpose: Upgrades and Design changes





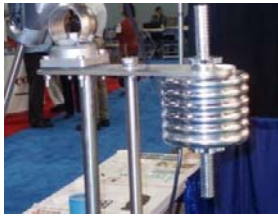
| Quick Disconnect | Tachometer and Sensor kit | VFD mounted and wired to motor | Power Cords | Stabilizer Ring |
|---|---|---|--|---|
|  |  |  |  |  |
| OD Coupling allows quick shaft change out. | Tachometer with digital display to read shaft RPM | Tachometer with digital display to read shaft RPM | 1ph power cord with switch and plug for motors. | Stabilizer ring used to support long shafts |

| Shroud Ring | Stabilizer Fin | Folding Impeller | Polish and Welded | Food Grade Lube |
|---|---|---|--|---|
|  |  |  |  |  |
| Protective ring on O.D. of impeller. | Fins used to stabilize shaft. | Impeller for Small tank openings. | All welded and polished impellers. | Food Grade grease in gearbox |

Mixer Stands Primary purpose: Support mixers above tanks



| SSMS- Base Stand | ALS – Air Lift Stand | ELS- Electric |
|---|---|--|
|  |  |  |
| Base lift stand for cup plate mounting | Air lift stand with mixer | Electric lift design |

| Caster Wheels | VFD Mounted | Strap and Arm | Controls | Counter Weights |
|---|---|---|--|---|
|  |  |  |  |  |
| Locking Caster wheels. (S.S.) | Mount and wire VFD to stand. | Adjustable tank strap and arm | Pneumatic controls and exhaust | Plated Steel plates used for balance |