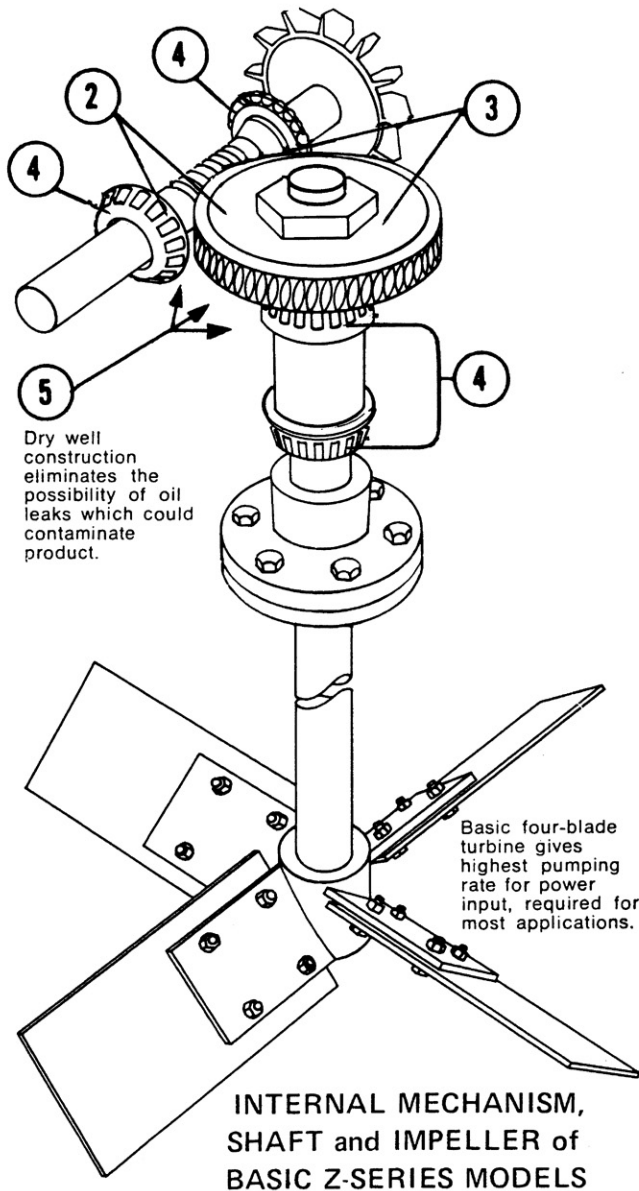
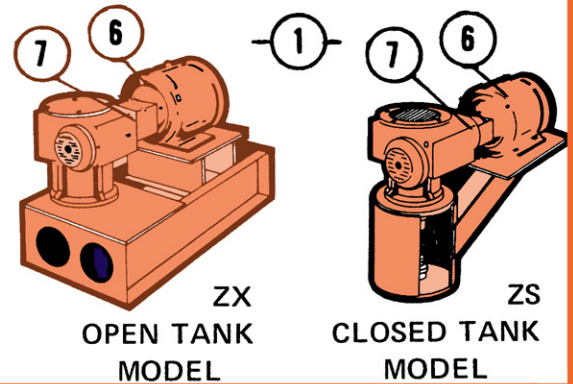


Uses single reduction gearing of unique, rugged design . . . involute helicoid thread form . . . to give the strength and power of a worm gear plus the efficiency of a helical or spiral bevel gear. Used where slow speed mixing is not needed. Generally used in tanks up to 5,000 gallons or for mild mixing up to 15,000 gallons. Available in 6 case sizes. The series includes both open tank models and closed tank models with options of a stuffing box or a double mechanical seal. The power source can be a standard motor or any adaptation to meet the customer's needs.



1. The key elements in your process are isolated.
2. The impeller geometry and speed needed to do the job are determined.
3. A standard power package is selected to turn the impeller at the speed required.
4. The selection is reviewed to be sure it is most economical.

ProQuip has four standard Z-series Power Packages with gear ratios that provide all normal top-entering agitator speeds within its horsepower capacities.

## 1 DESIGN FEATURES

The right angle configuration of the Power Package allows mounting in minimum headroom situations, as well as providing best access for servicing. The gears are enclosed in a rugged, oil-tight, cast-iron housing for strength and dependability and for resistance to chemical attack from most corrosive fumes which may be present. The case is designed with a "dry-well" to prevent oil leakage.

The Power Package is shipped completely assembled, ready for mounting.

## 2 REDUCTION

Reduction gearing provides output speeds down to 60 RPM with 1800 RPM motors, thus having substantially fewer parts than helical or spiral bevel units to reach comparable output speeds. Thus, advantage can be taken of the higher pumping rates and consequent lower power requirements associated with lower speeds.

The reduction gearing uses high efficiency worm gearing having an involute helicoid thread form. This thread form insures proper, close contact for higher capacity and longer life than other worm gears, yet achieves high efficiency without the necessity of lapping and running-in required for other high efficiency worm gears.

## 3 GEAR MECHANISM

The worm is machined from alloy steel and is hardened, ground and polished, providing a hard wear-resistant surface over a tough shock-resistant core. The gear is precision machined from centrifugally cast phosphor bronze and engages with at least three worm teeth at all times for a quiet, smooth flow of power. Since the teeth are under a crushing, rather than a bending load, they have a much higher capacity to sustain high starting loads

Continued on next page

You can now select a top entering agitator that's tailored to meet your process requirements . . . yet is made of standard components.

And there's no guess work involved. Here's how ProQuip methodically plans a solution to your mixing problem:

or momentary shock overloads. Further, should a gear be marked or scored through excessive shock, the hardened worm will regenerate the tooth form on the gear, rather than providing a point of excessive wear and premature failure.

#### 4 BEARINGS

The worm is carried in roller bearings maintaining precise alignment and providing long, dependable service. The gear is mounted on the substantially oversized output shaft. This shaft, carried in heavy-duty tapered roller bearings, allows large diameter overhung shafts to be used, avoiding shaft vibration or whip resulting from critical speed problems and hydraulically-induced bending moments.

#### 5 LUBRICATION

The Power Packages are designed so that they can be left unattended with confidence between normal routine maintenance and inspection checks. Each Power Package incorporates a combination of "dry-well" oil-lubricated gearing and grease-lubricated output shaft bearings. The case is constructed with an integral oil dam around the lower part of the output shaft and extending above the oil level. This provides a positive barrier against oil leakage. Thus, if the lower shaft seal wears, oil cannot run down the agitator shaft to contaminate the tank contents, nor can the gearing "run dry" and be dam-

aged. Power Packages are all test-run at the factory. They are shipped without oil, but are protected by thoroughly slushing them inside with an oil-soluble rust preventative before shipping.

#### 6 MOTORS

Motors are standard NEMA frame, horizontal, foot-mounted style with "chemical plant" construction, easily replaceable from your local supplier or interchangeable with in-plant spares. They are furnished with totally-enclosed construction (explosion-proof if location is hazardous); other enclosures, special insulation, windings, electrical characteristics or other features will be furnished when requested.

#### 7 COUPLING

The motor and drive unit are aligned at the factory and coupled by a flexible coupling to protect highspeed bearings by smoothing the starting shock and to accommodate any minor misalignment that may develop. A coupling guard is included as standard for safety considerations. Other coupling arrangements are available as required by special conditions.

Difficult starting applications may require fluid or friction disc couplings so that the motor can reach maximum torque. Fixed and variable speed belts and sheaves or torque-limiting couplings can be furnished when needed.

## GUARANTEE

ProQuip, Inc. accepts full responsibility for furnishing suitable equipment which shall be fit for the purpose for which it is required, and for its successful operation under the conditions for which it was specified.

*When agitation is an integral part of your process, ProQuip's staff of engineers and representatives is always ready to assist you in solving your process problems. They are happy to consult with you regarding design and specification of your system.*

*Each inquiry gets individual attention and a reliable, efficient, economical solution is proposed.*

*If you have a "hard-to-handle" process problem, contact your nearest ProQuip representative or write . . .*



**DESIGNERS and MANUFACTURERS OF AGITATION EQUIPMENT**

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Representatives in Major Cities in the U.S.