De Dietrich
PROCESS SYSTEMS

SERIES 60
AGITATOR DRIVE
De Dietrich

State-of-the-art Technology: DDPS' Series 60 agitator drive by Lightnin features high efficiency and long life

De Dietrich's reliable helical gear, Series 60 agitator drive manufactured by Lightnin was designed to our stringent specifications, to meet the special needs of glass-lined vessel users. Series 60 is optimized for use over the entire working temperature range of a glass-lined reactor with a "non-metallic" shaft seal. This optimal design is based on: (1) Lightnin's experience with thousands of successful applications of a predecessor drive with a similar gearing, some at work for more than a decade, and (2) the reliable DDPS seal cartridge, in use for over 35 years.

The low-profile drive offers a unique combination of features never before available in one drive. The agitator shaft is connected to the drive with a special quill shaft featuring tight tolerances and low runout. In fact, the maximum shaft runout is so low, that no adjustment is needed, as it is in conventional designs. Quill-shaft mounting also simplifies seal removal, reducing costly downtime (for details see page 3).

The De Dietrich Series 60 can be retrofitted as a vertical mount to any major brand glass-lined steel reactor in the world. The drive size exchange chart on page 3 shows some of the options for retrofitting a new Series 60 to your existing reactor. Whether it's at work on a new De Dietrich reactor or retrofitted to your non-De Dietrich vessel, Series 60 is your best bet for high performance and the peace of mind that comes with reliability.

Series 60 drive, shown her on a closed welded SA series reactor.

Advantages of Series 60

- Long-life, low-maintenance design.
- Large diameter, preloaded tapered roller bearings provide optimum blend of rigid shaft support for very low runout with low-profile design.
- Long L10 bearing life: 100,000 to 500,000 hours for output shaft bearings.
- Quality 10 helical gearing: no low efficiency worm gear to heat up or belts to slip.
- Minimum numbers of parts, simplified construction and rugged, rigid ductile iron housing.
- Extremely low noise level.
- High drive efficiency gives lower power consumption.
- Compact design reduces headroom requirements, simplifies vessel piping.
- Immersed oil lubrication.
- Infrequent oil changes: once a year is average.
- Drywell construction eliminates oil leakage at output and input shafts.
- Submerged oil lubrication means no oil pump or slinger to fail, no grease required – allows angular offset mounting.
- Quick, easy seal removal reduces costly downtime.
- Can be retrofitted to any major brand reactor in the world.

Two mounting options

• Angular-offset drive for dependability and maximum performance: best-ever top-to-bottom turnover without costly baffling

• Vertical-mounted drive (shown above) for dependability and performance.

"Our performance mechanics commented on the ease of installation of this drive, including the dry seal which was used. We are also pleased that the seal may be changed without lifting the drive, as we have areas with low overhead clearances. We felt that these points will reduce the initial and future maintenance labor costs associated with agitators."

-A Major Pharmaceutical Company

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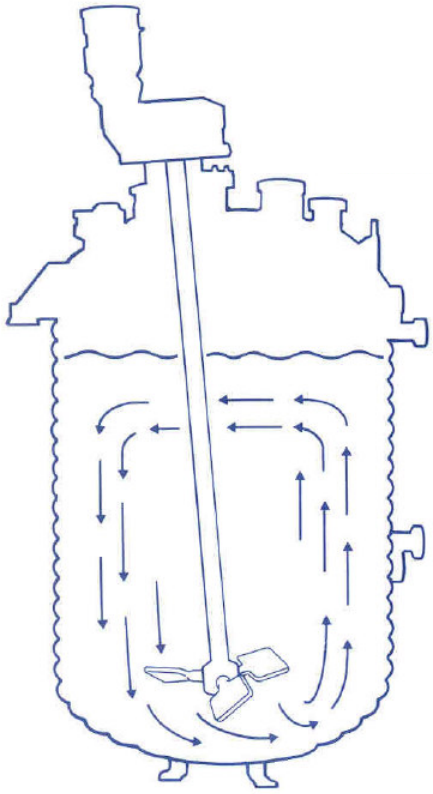
AGITATOR DRIVE

Angular-offset mounting means best-ever top-to-bottom turnover without need for costly baffles

The advantages of angular-offset mounting have long been recognized in lightweight, grease-lubricated portable mixers. Now, for the first time angle mounting is possible with a heavy duty, oil-lubricated drive specially designed for glass-lined agitation. In the De Dietrich Series 60 drive, all gearing and bearings operate submerged in oil with drywell construction. The oil bath ensures reliable lubrication, giving the De Dietrich series 60 an angular offset capability never before available in a drive of this type.



Why angular offset? Because a properly positioned angle-mounted drive can provide exceptional top-to-bottom turnover, every bit equal to costly four-wall baffling! The diagram at right shows typical flow patterns developed by an angular offset

De Dietrich Series 60 angle-mounted drives are presently available for use in conjunction with the optimally positioned nozzle on De Dietrich CGL HemiCoil or GL conventional jacketed reactors, 3000 gallons and lower.

Available Options

The following products are available to optimize the process possibilities of the Series 60 drive:

- GlasLock agitator
- OptiMix baffles
- HemiCoil jacket

Retrofit Drive Size Exchange

The chart below shows how Dietrich Series 60 can replace some common glass-lined reactor drives. These are nominal replacements for standard vessesl. For retrofit informtion on drives or reactors not shown here, contact DDPS.

Std. Reactor Size (gal)	Series 60 Drive Size	Nominally replaces these drives:			
		Pfaudler SRW	Pfaudler DTW	Pfaudler RW	Philadelphia
300	61Q	3525	3DTW	4RW	PTE-06
500	61Q	3525	4DTW	4RW	PTE-06
750	61Q	3525	5DTW	5RW	PTE-06
1000	62Q	5035	5DTW	5RW	PTE-08
1500	62Q	5035	5DTW	5RW	PTE-08
2000	62Q	5035	5DTW	5RW	PTE-08
3000	63Q	6045	6DTW	6RW	PTE-10
4000	63Q	7055	7DTW	7RW	PTE-12
5000	64Q	7055		7RW	PTE-12
6000	64Q			8RW	PTE-16
8000	64Q			8RW	PTE-16
10000	64Q			100RH	PTE-24

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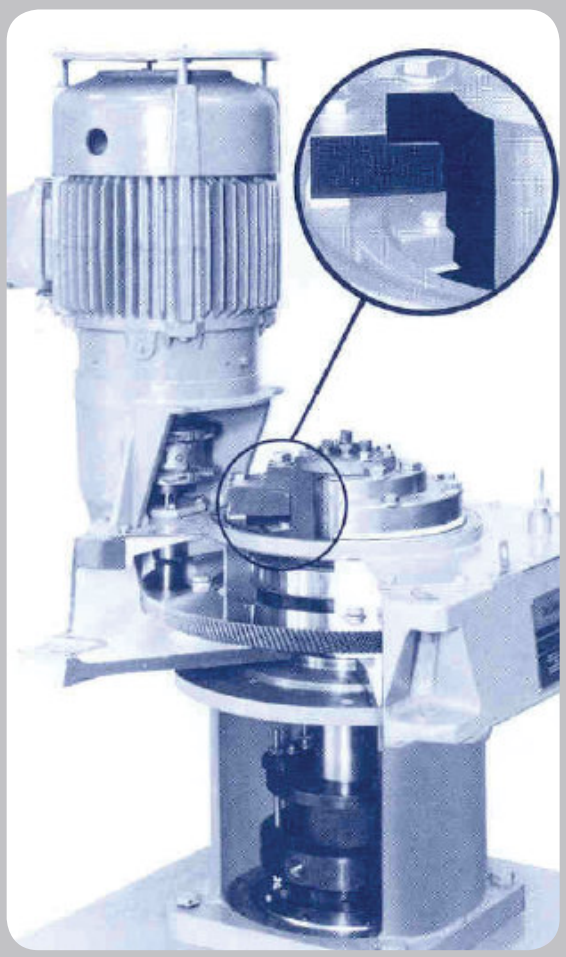
AGITATOR DRIVES

Quick, easy seal removal with DDPS' Series 60 agitator drive

De Dietrich's specifications for the Series 60 drive include a special quill shaft design of mounting the agitator shaft to the drive, as shown in the photograph at right. The annular quill shaft makes it possible to use our standard "non-metallic" seal cartridge the same reliable seal that's been time-tested and customer approved on De Dietrich reactors for over 25 years. The seal housing/cartridge assembly can be removed intact during normal maintenance without entering the vessel or removing the drive-and replaced in about an hour.

No additional headroom is required for seal removal. Simple removal of seal housing assembly during normal maintenance permits "wide-open" viewing and easy cleaning of the critical ground-glass (seal-bearing) portion of the agitator shaft. The same basic seal cartridge can be converted from standard double lubricated to double dry running. Photos at left show seal housing/cartridge assembly in place (top), and removed as standard operating procedure during normal maintenance (bottom).



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