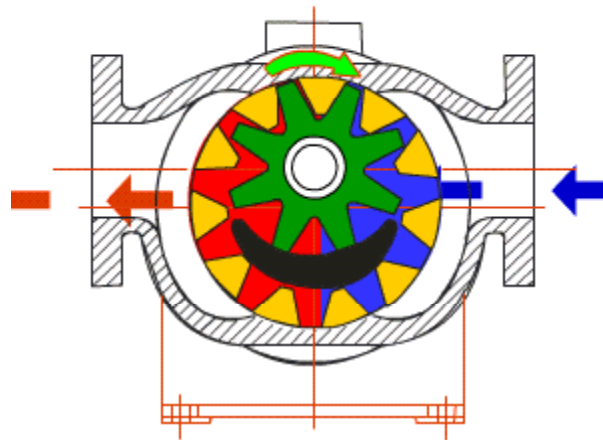


# DELTA P D PUMPS PRIVATE LIMITED

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## INTERNAL GEAR PUMPS



## SERIES DIG

*For all your pumping needs since 1968...*

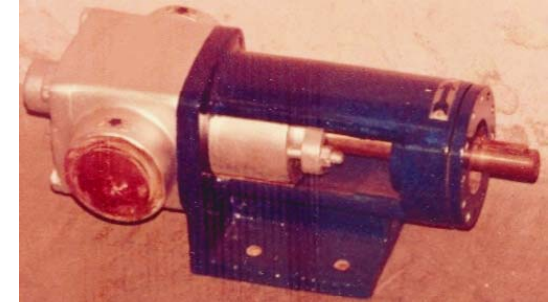
## INTRODUCTION



The very first pump produced by DELTA CORPORATION in 1968 was an Internal Gear Pump

The internal gear pump is particularly suitable for liquids that have a wide range of viscosity, because of their relatively low speeds. The internal gear pump has some advantages over the external gear pump. Because the two gears rotate in the same direction, the friction is substantially lower than with the external gear pump. The localized fluid pressures are substantially lower, and so are the shearing forces on the fluid. The noise an internal gear pump produces, is also notably lower.

The innovative and simple construction ensures very easy maintenance and totally reliable hassle free installation.



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## WORKING PRINCIPLE

DIG series employs proven Internal Gearing (Gear within Gear) principle for pumping.

The internal gear pump is recognizable on its outer ring. The principle of the internal gear pump, the opening between the teeth is getting wider as the gear rotates, and because this space is getting wider, the liquid is sucked into it. When the gear reaches the output side, the space is getting smaller, pushing the liquid into the outlet. (see picture).

The main gear is keyed to the drive shaft, and rotates concentric in the pump casing. Idler is located on an eccentric pin on the front cover to rotate freely and meshes with main gear when assembled.

A crescent shaped partition precision machined on the front cover maintains a small, but positive clearance to achieve perfect sealing between parts.

As the gears come out of mesh, a partial vacuum is created, forcing the fluid to rush into the pump casing and fill in the voids between the teeth.



## WORKING PRINCIPLE

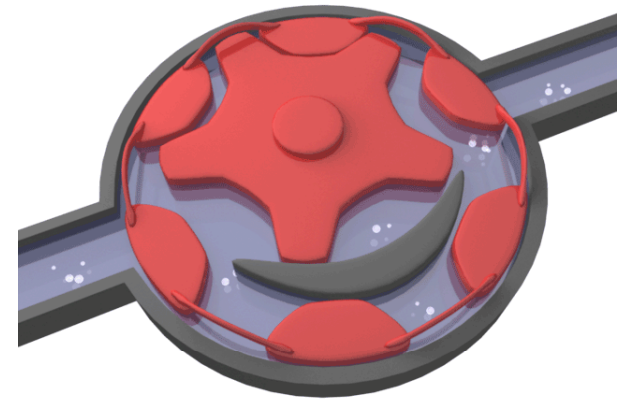
Both gears rotating in the same direction of rotation gently transfer the fluid to the delivery port.

The resulting action is a smooth-steady flow; low in pulsation, noise and vibration.

Single shaft design well supported on outboard bearing (except for one inside sleeve bearing) enables to pump products even with poor lubricating value unlike in the external gear pumps.

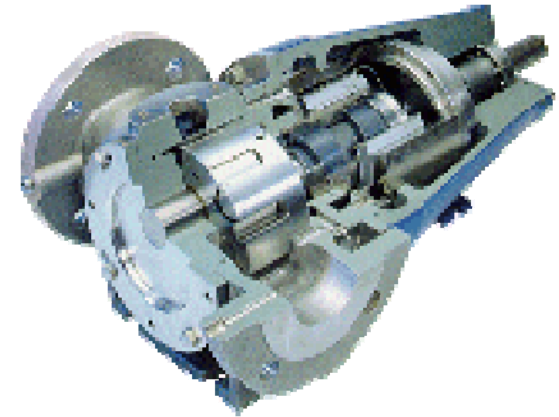
External bearing construction offers easy access the pump components i.e., rotor set and even pump casing simply by removing the front cover without disturbing drive parts, bearings etc., and in place.

It is easily possible to jacket front and rear covers for products heating - thus making the design unique and versatile - ideally suited for process pumping.



## CONSTRUCTION

- The IG series is modular developed with excellent interchangeability. The bracket mounted casing construction provides stress free operation while handling products at higher temperatures. The major components are casing, front cover, rear cover, seal box (casing parts) and rotor set (rotor, idler and shaft). Most casing components are made by lost wax process for better finish and grain structure.
- Another unique feature is the adjusting clearance between rotor set and cover by means of rotor positioning device enabling to restore pump capacity even after wear and tear after a long use.
- Pumps can be equipped with Heating/ Cooling Jacket on front cover/ rear cover and in some cases also Pump Housing. Choice of Mechanical Seal/ Stuffing box is available for shaft sealing.



## SALIENT FEATURES



- Smooth quiet flow
- Reversibility
- Excellent self priming
- Bracket mounting allows free expansion/ contraction - alignment not affected
- Insensitive to viscosities
- Easy maintenance
- All metal construction, no contamination
- Single sealing, external bearing
- Slow speeds ensure better pumping & longer life
- Low noise and pulsation
- Reduced maintenance

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## DIG SERIES RANGE



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<b>Max. Capacity</b>	<b>800 LPM</b>
<b>Max. Pressure std.</b>	<b>7 kg/cm<sup>2</sup></b>
<b>Max. Pressure spl.</b>	<b>14 kg/cm<sup>2</sup></b>
<b>Viscosity</b>	<b>100,000 cSt</b>
<b>Temperature</b>	<b>250°C</b>

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## TYPICAL LIQUID LIST



- Baby Foods
- Fruit Concentrates
- Lecithin
- Soap
- Batter
- Fruit Drinks
- Lotions
- Soups
- Butter
- Fruit Fillings
- Margarine
- Starch
- Caramel
- Fruit Puree
- Mayonnaise
- Sweeteners
- Chewing Gum Base
- Fudge
- Molasses
- Syrups
- Chocolate
- Gelatin
- Oils
- Soft Drink Concentrate
- Coffee
- Glucose
- Peanut Butter
- Tomato Puree
- Cookie Dough
- Gums
- Printing Ink
- Tomato Paste
- Cottage Cheese
- Honey
- Pudding
- Tooth Paste
- Curd
- Ice Cream
- Putty
- Wheat Gluten
- Extracts Flavoring
- Icing
- Red Chilly Paste
- Whey
- Fondant
- Jams
- Salad Dressings
- Yeast
- Fats
- Jellies
- Sauce
- Yeast Slurry
- Frostings
- Ketchup
- Shampoos
- Yogurt

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**THANK YOU**

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