



Process Equipment Manufacturers

SEDIMENTATION | FILTRATION | MIXING

DRIVE HEADS



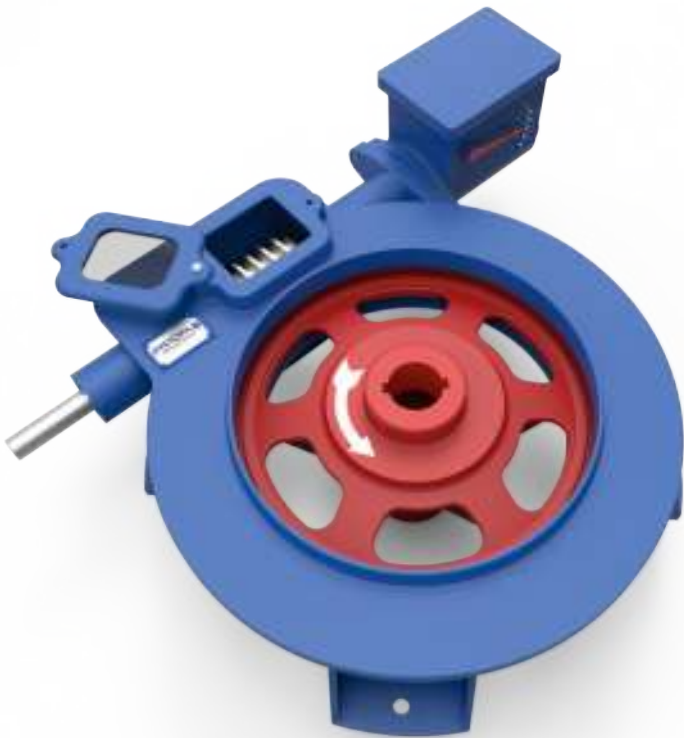
INTRODUCTION

INDOFAB INDUSTRIES having more than 35 years experience of “ Inhouse Design & Manufacturing of Sedimentation Equipments ” ; Specially manufactured 'High Torque Slow Speed sturdy Drives' form the most critical part of all sedimentation equipment; more popularly known as Drive Heads or Centre Mechanisms; These Drive Systems are used & preferred by many OEM, EPC & Consultants equally for installation with wide range of Scrapper Mechanism like Clarifiers, Thickeners, De-Gritters, HRSCC, Flocculators & Clariflocculators.

These Drive systems are considered to be “ Cost Effective & Sturdy Solution for Driving Sedimentation Equipment ” as they are easy to install and maintain with interchangeable spares assuring durability for life.

BRIDGE MOUNTED MECHANISM DRIVES

Alias A-TYPE DRIVES / FIXED BRIDGE DRIVES OR CENTRAL DRIVES



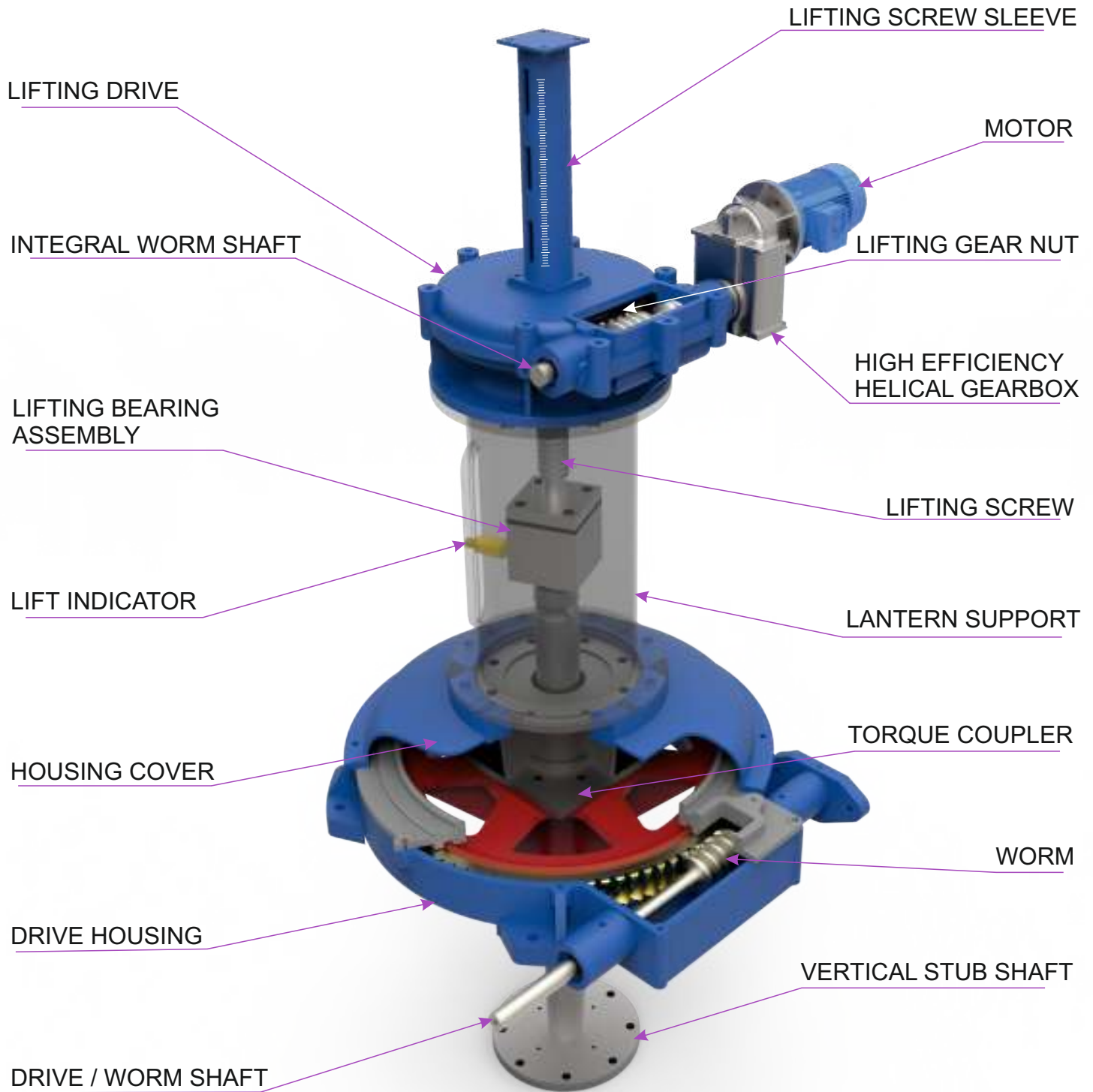
- These Drives are typically made of CS or Graded Iron Worm Wheel resting on a large size Bearing (Steel Balls & Bearing Strip Liners forming a bearing cage) driven by Alloy Steel Hardened worm fixed to the Worm Shaft. The EN8/EN19 Worm shaft is driven & coupled by suitably selected Gear box & Motor.
- The Worm Shaft, Worm, Worm Wheel with all bearings, Adaptor & Thrust collar are Splash Oil Bath Lubricated in a Gear Housing & Top covered with a housing cover.
- The gear housing & cover are typically shaped to give large base & easy foundation holes, Oil Indicator, Oil Drain, Inspection Cover & Seals / gaskets to be put in place.
- Large sizes of Drive >900mm are provided with Special Fabricated Steel Hub to take severe shock loads & simultaneously facilitate easy Gear design and maintenance.

- These types of drives are used for:

| | |
|---------------------------------------|---|
| • Clarifiers | : 3 Mtr Dia. To 45 Mtr Dia. |
| • Solids Contact Clarifiers (HRSCC) | : 4 Mtr Dia. To 40 Mtr Dia. |
| • Thickeners | : 3 Mtr Dia. To 36 Mtr Dia. |
| • Clariflocculators | : 5 Mtr Dia. To 18 Mtr. Dia. With Standard Drives and Central Large Flocculator |
| • De-Gritting / Bowl Rake Classifiers | : 2.5 Mtr Dia To 8 Mtr. Dia. |
| • Detritor / De-gritter | : 2.5 Mtr Dia. To 12 Mtr.Dia |

BRIDGE MOUNTED DRIVE WITH AUTO LIFTING DEVICE

Optional : Manual, Motorised & Hydraulic Lifting Device



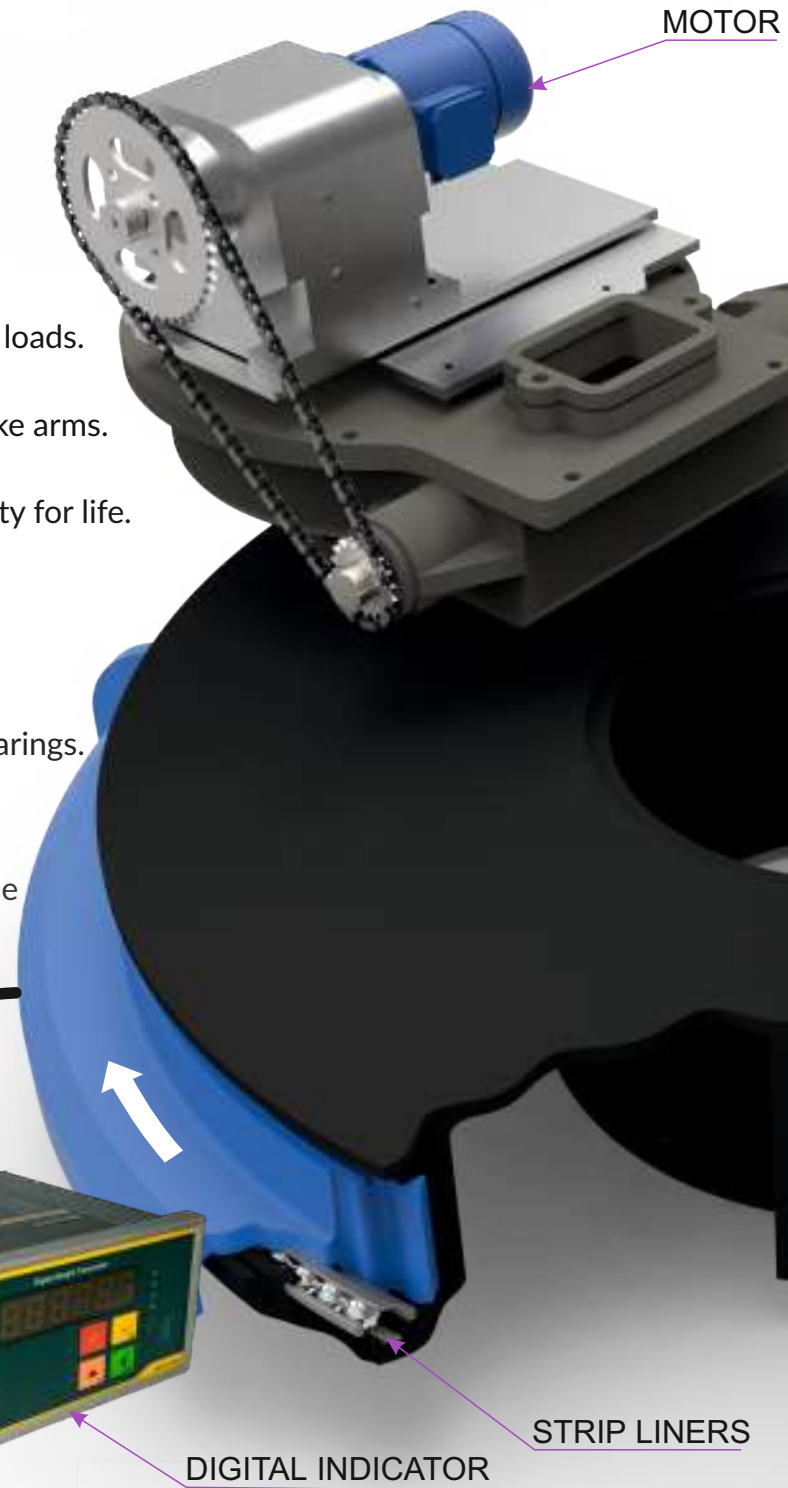
- Motorised lifting device enables lifting of scrapper mechanism during operation with increase in load & vice versa.
- Essential when used for rapid settling slurries, Autolift mechanism senses and initiates lifting device thus protecting the rake mechanism & enabling continuous operations.
- No Rotary Electrical Contacts or Slip rings (normally very fragile & costly); This makes Motorized lifting device more cost effective & trouble free in operation.
- Lifting Device with traditional slip rings systems are also available on request.
- Lifting Device are available for standard lifts of 300, 450, 600, 900 and 1200 mm lifts.

COLUMN MOUNTED MECHANISM DRIVES

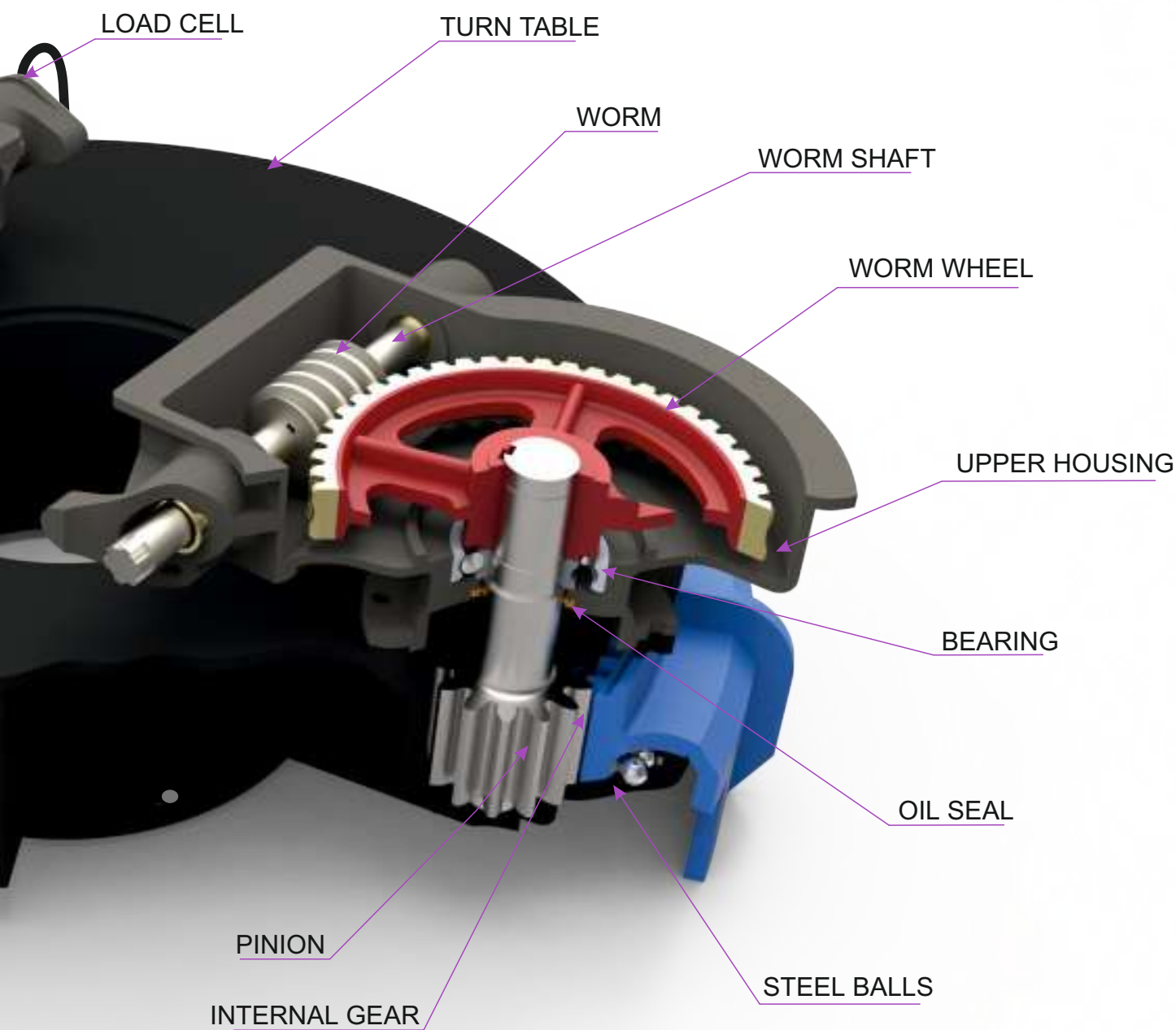
Alias S-TYPE DRIVES / PIER MOUNTED DRIVES OR CENTRAL TURN TABLE DRIVES.

Features :

- Large Bearing area for carrying Heavy suspended loads.
- Capable to withstand Overturning moment of Rake arms.
- Robust construction of Turntable ensures durability for life.
- Large Face width gears for higher torque capacity
- Low refurbishment cost due to easily replaceable standard sizes of bearing strips, steel balls and bearings.
- Available with Mechanical / Digital Overload protection systems to measure and monitor torque



- These systems are most popular for being robust in construction and are mounted on the Centre Pier or Centre Column. These are very cost effective mechanisms for reducing the high cost of full spanning Mechanism Support to a mere half walkway bridge.
- A typical Construction consists of a Cast Iron Turn table cum housing which is fixed on the Centre Pier and encompasses the Rotating Internal Gear with its large diameter caged bearing. The Rotating Internal Gear are provided with 4 or 8 Lugs as integral part to suspend the centre cage / rake arms.
- The Rotating Internal Gear housed in the Turn Table is driven by an alloy Steel Pinion through a Worm & Worm Wheel Upper Gear Housing forming the Second Stage Reduction of the Drive Mechanism. The Upper Gear Housing & the Lower Turn Table both are oil bath lubricated arrangement with proper seals , interchangeable bearings & Oil Indicator/Drain arrangements.



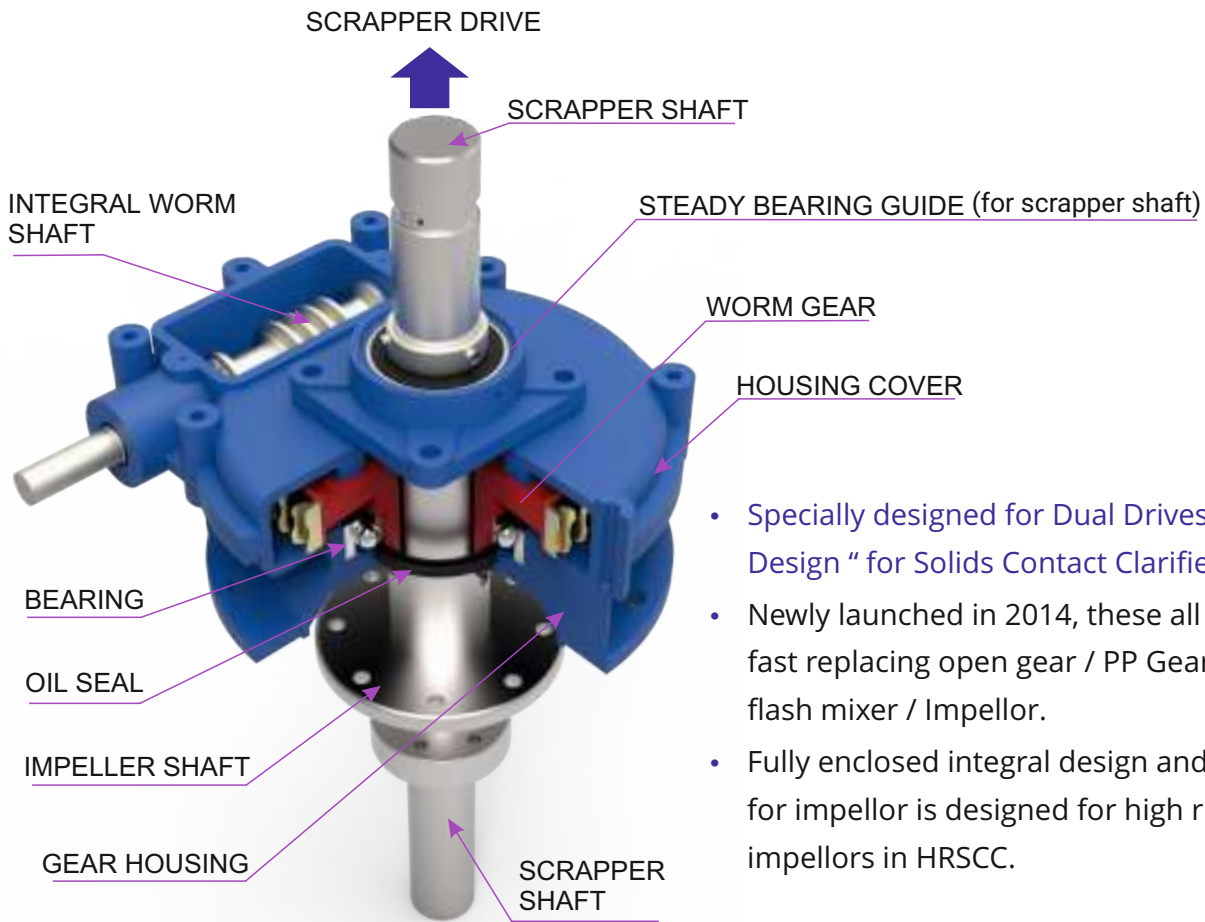
- The above entire system together with a suitable Gear box & Motor is termed as Centre Mechanism or Pier mounted Drive.

These types of drives are used for :

- | | |
|--------------------------------------|---|
| • Clarifiers | : 12 Mtr Dia. To 52 Mtr Dia. |
| • Solids Contact Clarifiers (HRSCC) | : From 20 Mtr Dia. To 48 Mtr Dia. |
| • Thickeners | : 12 Mtr Dia. To 44 Mtr Dia. |
| • Clariflocculators | : From 12 Mtr to 65 Mtr Dia. With options of Special Bevel or Combination Drives. |
| • De-Gritting : Detritor /De-gritter | : 8 Mtr Dia. To 20 Mtrs. |

HIGH SPEED DRIVES

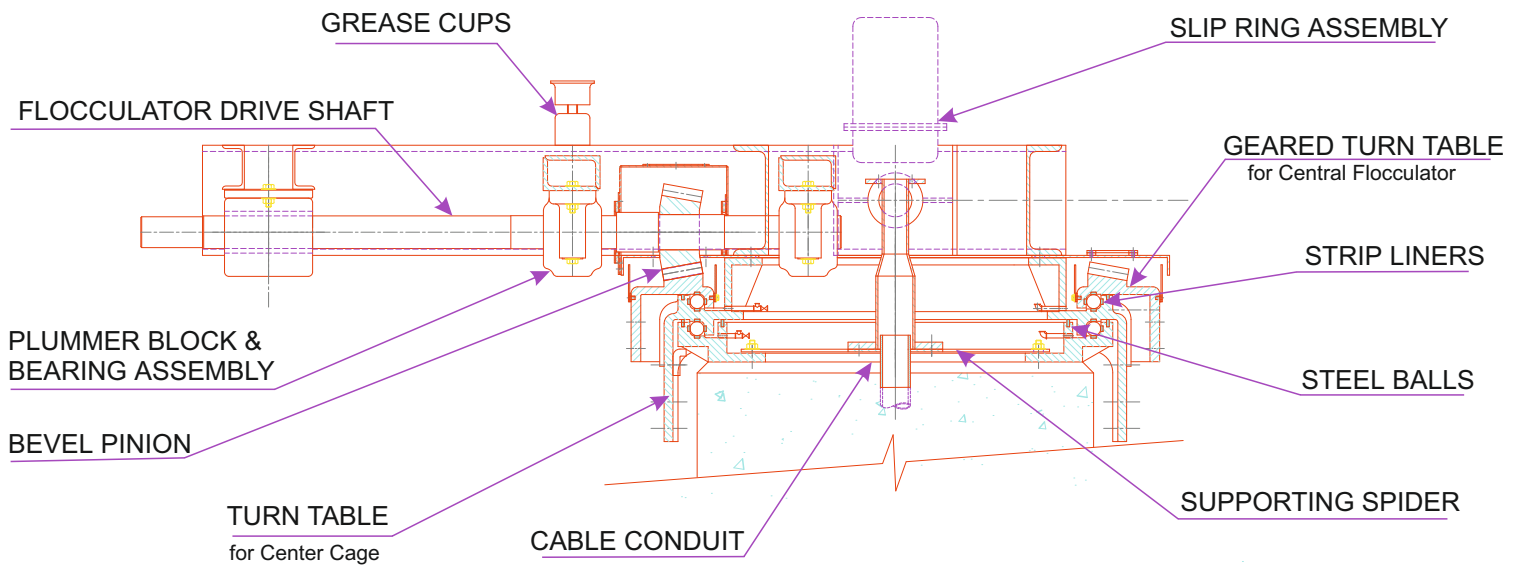
Alias HRSCC IMPELLER DRIVE / DRIVE FOR 2 - 26 RPM SYSTEMS



- Specially designed for Dual Drives with " Shaft In Shaft Design " for Solids Contact Clarifiers.
- Newly launched in 2014, these all bearing drives are fast replacing open gear / PP Gear drives for HRSCC flash mixer / Impellor.
- Fully enclosed integral design and independent drive for impellor is designed for high rpm torque of impellers in HRSCC.

CENTRAL FLOCCULATOR DRIVES

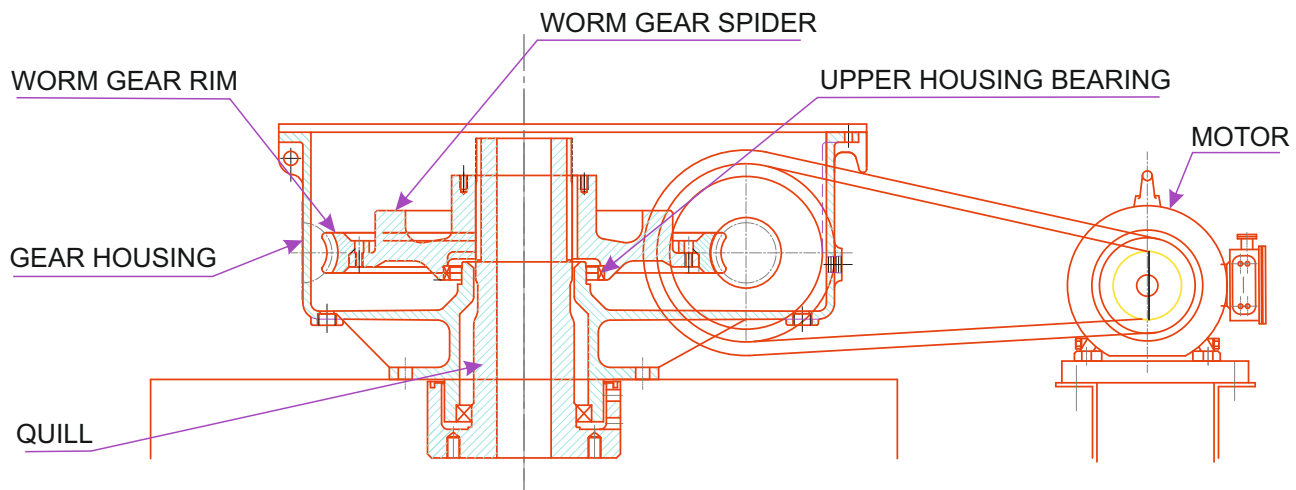
Alias DUAL DRIVES FOR CLARIFLOCCULATORS



- Very widely used, high torque capacity flocculator drives are available in 900, 1200 & 1500 mm size turn table combinations. This drive rotates central large flocculator of upto 35 Mtr dia in clariflocculators upto 72 Mtr Dia. achieving percent sweep & G values required for flocculation.
- This drive is one of most preferred design used for clariflocculators of high performance.

HEAVY DUTY ALL BEARING DRIVES

Alias AGITATOR DRIVES / HIGH TORQUE THICKENER DRIVES



- Typically such drive consists of Alloy Steel Integral Worm Shaft assembled on End Bearings to drive the Worm Wheel (CS/Gr.CI/Bronze) resting on a large size heavy duty bearing. A Quill shaft is assembled in Worm Wheel Hub with an additional Steady Guide Bottom Bearing. These set of bearings forms the Bearing Housing necessary to take High Speed High Torque required in the Application. These Drives are housed in a CS/CI housing with large capacity Oil bath for continuous Rigorous operating conditions.
- Available in wide operating range of 0.1 to 24 rpm & standardised sizes from 5000 Kg-M upto 60000 Kg-M Continuous operating torque.
- These types are typically used for to Heavy Duty Agitators, Thickeners , Paddle Agitators , Dregs Mixers and Storage Tank Agitators.

SALIENT FEATURES OF INDOFAB DRIVEHEADS :

- Available in both types Bridge Mounted & Centre Pier Mounted Drive Systems.
- Environment Friendly compact construction consisting of:
 - a. Complete system design to consume very low operating power.
 - b. Full enclosed Drive with widely available 320 Grade Oil bath Lubrication.
 - c. Very Low Sound & Lowest Vibrations due to Sturdy & large base.
- Standard Torque Ranges in steps and ratios from 200 Kg.Mtr / 50:1 to 85000 Kg.Mtr / 710:1 are available.
- We are flexible to custom built the Drive as per Design Torque requirement of the Particular application.
- For Tough Applications high end variants with Manual, Motorized & Hydraulic Lifting Devices with maximum lifting possible in steps of 300, 450, 600, 900 & 1200mm
- Torque Overload Indication is available in various types like Mechanical, Electro-Mechanical, Digital types.
- Integration with PLC is possible with Digital Load Cells & also Auto lift of Rotating Mechanisms is easily achieved with suitable design of Control Panel ensuring operational safety at all times.

APPLICATIONS:

These Drive systems are used to handle a wide range & toughest application areas like Mineral beneficiation; Causticizing, Pulp & Paper, Waste Water Treatment, Effluent treatment, Water Treatment, Sewage Treatment, product Thickening & other solid-liquid separation systems.

MATERIAL OF CONSTRUCTION:

Available with wide variety of Material constructions like CS, Graded Cast Iron, Graded S.G.Iron, Alloy Steel of EN grades & Bronze.

INDOFAB INDUSTRIES

Process Equipment Manufacturers
ISO 9001:2015 Certified Company

INDOFAB INDUSTRIES is a well-known name for supply of Quality Process Equipments for past 35 years. The company has its legacy of working with top notch EPC contractors and Consultants, serving large size Project requirements for Government & Private Organizations.

INDOFAB is an ISO 9001:2015 Certified company for Design & Manufacture of Industrial Process Equipments in the field of solid-liquid separation; working for diverse Industries like WTP, ETP, STP, Municipal/Industrial Water & Waste Water Treatment, Paper & Pulp, Mineral Processing & Ore Beneficiation and Milk of Lime Plants.

The company has In-house Design, Testing, Pilot Facilities for Establishing its designs & continues to deploy latest Analysis/Design tools for Process Equipment Design. Combined with In-house Manufacturing Capacity with over 44000 Sq.Ft. Working area with 8 EOT Cranes facilitates working of about 100+ team turning out more than 1150 tons of steel per annum.

Strategically located facilities in & around Mumbai our office & manufacturing facilities are easily accessible for representatives, heavy vehicles & port facilities. We at INDOFAB are glad to retain more than 75% of our repeat clients due to our efficient after sales spares & services for decades together.

Few of our Esteemed Clients / Consultants we work for



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