### Sumitomo Drive Technologies

Sumitomo, Hansen and Seisa. Three brands, one global power transmission solutions provider. Sumitomo Drive Technologies has facilities strategically located throughout the world, providing comprehensive products and services in your region.

★ MANUFACTURING HUB ASSEMBLY & SERVICE SERVICE

▲ REGIONAL SALES OFFICE



Sumitomo Machinery Corporation of America

www.SumitomoDrive.com

For worldwide locations, please visit www.sumitomodrive.com/worldwide Contact your local representative at www.sumitomodrive.com/representative Tel: 1-800-SM-CYCLO (762-9256) 01.001.51.04 Product Showcase 2020

## Sumitomo Drive Technologies







We offer a comprehensive lineup of high quality power transmission products.

we have the right product for you.

## Robust, Reliable, Efficient

## No Matter the Application



### **CYCLO**<sup>®</sup> 6000

- Up to **235 HP** (175 kW)
- 1/2in to 7in (Solid Shaft)
- Up to 603,000 lb•in (68,130 N•m)
- 3:1 up to 658,503:1



### **HYPONIC®**

- Up to **15 HP** (11 kW)
- 3/4in to 2in (Hollow & Solid)
- Up to **13,100 lb·in** (1,480 N•m)
- 5:1 up to 1,440:1



### **B4 CYCLO®** BBB 4

- Up to **100 HP** (75 kW)
- 1in to 4-15/16in (Hollow & Solid)
- Up to **159,983 lb·in** (18,076 N•m)
- 11:1 up to 26,000:1 and greater



**MC MOTION** Control

- Zero mechanical backlash
- Up to 138mm (Hollow Bore)
- Up to 265,522 lb-in (30,000 N-m)
- 29:1 up to 283:1



### P4 HANSEN P4

- Up to **14,080 HP** (10,500 kW)

- **INVERTERS** E3 & P2
- Up to **350 HP** (250 kW)
- 200 to 600V (Single & 3-Phase)
- Up to 200% (From Zero Speed)
- Up to 200% Overload (4 secs)



### **BBB** H

- Up to **15 HP** (11 kW)
- 40mm to 55mm (Hollow & Solid)
- Up to **9,028lb**•in (1,020 N•m)
- 5:1 up to 20:1



### **FORTRESS**<sup>®</sup>

- Up to **2 HP** (1.5 kW)
- 3/4in to 1-7/16in (Hollow & Solid)
- Up to 1,970 lb•in (223 N•m)
- 7:1 up to 60:1



**PARAMAX®** 9000

• Up to **5,230 HP** (3,900 kW)

• 6.3:1 up to 500:1 standard

• **5mm** to **360mm** (Hollow & Solid)

• Up to 4.9m lb•in (553,626 N•m)



# For any of your power transmission needs,





• 1-3/16in to 6 1/2in (Hollow Bore) • Up to **75,800 lb·in** (8,564 N•m)

### HS HELICAL Shaft Mount

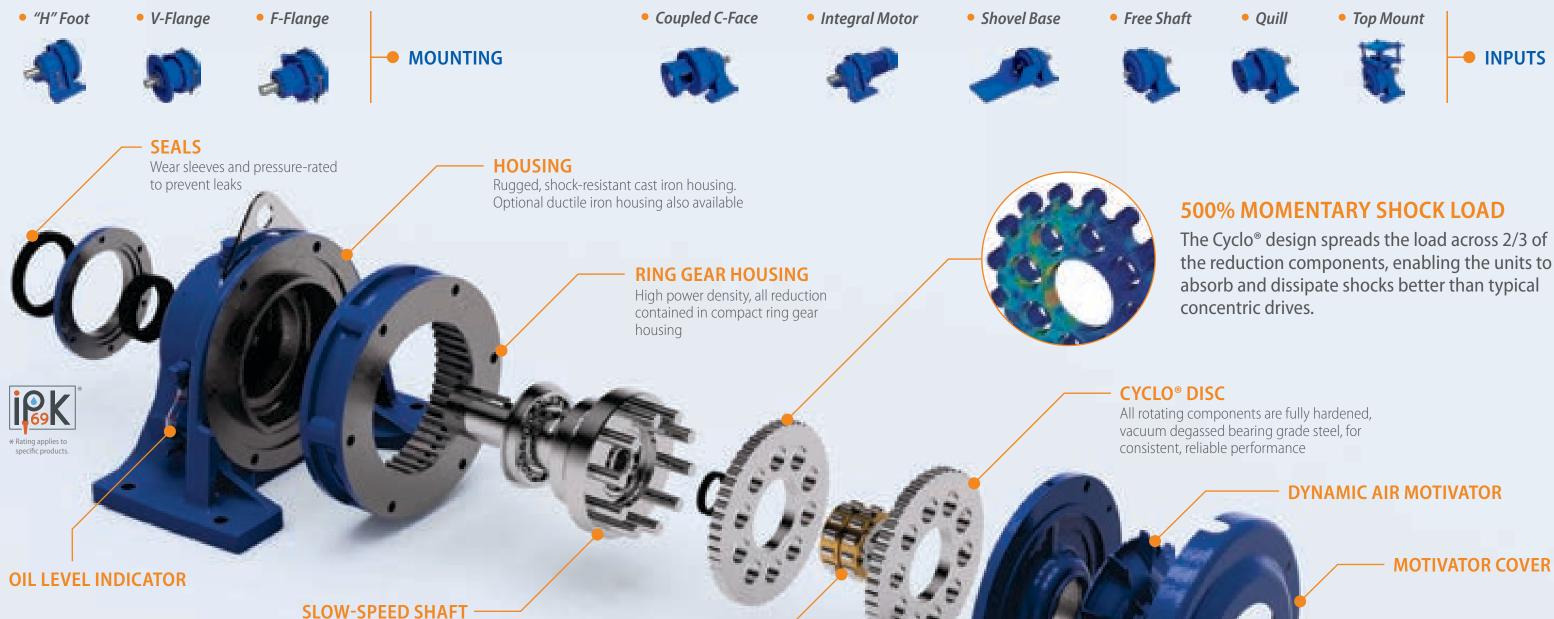
- Up to 300 HP (224 kW)
- **107** to **608** (Hollow Bore)
- Up to 388,884 lb•in (43,938 N•m)
- 5:1, 9:1, 14:1, 20:1, 25:1



• 3.15in to 15.75in (Solid Shaft) • Up to **9.7m lb•in** (1.1m N•m) • Up to 630:1 (and custom ratios)

### **U** UNIMINER

- Up to 2,330 HP (1,738 kW)
- 7.5in to 4.625in (Hollow & Solid)
- Up to 889,000 lb•in (100,445 N•m)
- 8:1 to 71:1 (and custom ratios)



## **C**YCLO<sup>®</sup> 6000

### **ECCENTRIC CAM**

### **UNMATCHED RELIABILITY & EXCEPTIONAL PERFORMANCE**

Cyclo<sup>®</sup> speed reducers and gearmotors are the **premier in-line drives**. The revolutionary Cyclo<sup>®</sup> design provides quiet, efficient, and reliable performance exceeding that of involute tooth gear designs.

Unlike geared designs, the Cyclo<sup>®</sup>'s reduction components operate in compression rather than shear, which results in exceptionally rugged and shock resistant performance.

The Cyclo<sup>®</sup> technology coupled with innovative product options and accessories offer the most extensive range of application solutions available.



**Overhead Drive** 



Mixer Drive



**HP RATING** Up to 235 HP (175 kW)

MOBIL SHC<sup>™</sup> GEAR HI-SHOCK 150

• High-Performance Synthetic Lubricant

Available for Cyclo<sup>®</sup> Products

• Extends the Life up to 3 Times

• Available 3-Year Warranty





**HIGH-SPEED SHAFT** 



TORQUE *Up to 603,000 lb•in* (68,130 N•m)



**RATIO RANGE** 3:1 up to 658,503:1



**iP**<sub>69</sub>K

### **HYPOID PINION**

Single-piece all steel hypoidal pinion for longer life. Lasts millions of cycles without measurable wear

**SEALS** Multiple lip, harsh duty, and food grade designs available to prevent leaks

DUAL BEARING SUPPORT —



### **REQUIRES NO OIL CHANGES AND UP TO 93% EFFICIENT**

The Sumitomo Hyponic<sup>®</sup> gearing represents over **25 years of hypoid gearing excellence**. With millions of Hyponic<sup>®</sup> units currently in service, the product features a compact, modular housing, maintenance-free grease lubrication and boasts a **gear efficiency of up to 93%** across all ratios.

The **maintenance-free** grease lubrication enables the unit to be mounted in any orientation without custom modifications. In addition to general-purpose solutions, with multiple food grade options, Hyponic<sup>®</sup> is perfect for **harsh, high-pressure wash-down environments**.

Simplify your gear drive assembly and increase efficiency by switching to Hyponic<sup>®</sup>.













DIAMETER 3/4in to 2in

### **DUAL BEARING SUPPORT -**

**C-FACE QUILL** 

Supported by two bearings for long life, the quill style motor adapter allows for maximum motor flexibility



### **ALL-STEEL HYPOID GEARING**

Patented Hyponic<sup>®</sup> gear technology is up to 93% gear efficient across all ratios providing a smooth, quiet operation which does not require a cooling fan.



**OPTIONS** •



• Shrink Disc



Stainless Steel Motor

Single-piece all steel hypoidal pinion

with dual bearing support for longer

life. Lasts millions of cycles without

**HYPOID PINION** 

measurable wear

INDUSTRIES -

Fruit & Veg

COVER PLATE Precision machined internal surface with seal groove to enhance the maintenance-free

sealed-for-life unit

**ALL-STEEL HYPOIDAL GEARS** 

Long-lasting hypoid gear efficiencies up to 93% with smooth and quiet operation

Trast

### **NEMA QUILL C-FACE**

The quill style motor adapter allows for maximum motor flexibility. Supports NEMA 56C, 143TC, and 145TC

### **CONTOURED HOUSING**

Unique design reduces the build-up of bacteria in those hard to reach areas

### HIGHLY EFFICIENT, GREASE LUBRICATED, COMPACT DESIGN

With over **25 years of hypoid gearing excellence**, we are experts in efficiency. Fortress<sup>™</sup> features a compact, modular housing, food grade grease lubrication, and boasts up to 93% gear efficiency. The IP69K rating also means that it's perfect for harsh, high-pressure wash-down environments.

The **maintenance-free** grease lubrication enables the unit to be mounted in any orientation without custom modifications. Additionally, take advantage of our flange, foot-mount, and torgue arm options which drop right in, allowing you to conveniently replace those old, inefficient gearboxes.

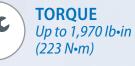
Simplify your gear drive assembly, increase your efficiency, and protect your operation by switching to Fortress<sup>™</sup>.

SPECS (

**HP RATING** 1/2 HP to 2 HP (1.5 kW)



DIAMETER 3/4in to 1-7/16in



i<mark>P</mark>K

**RATIO RANGE** 7:1 up to 60:1

MOUNTING •



Our cutting-edge in-house laser etching technology ensures a cleaner finish by eliminating the need for an attached nameplate. This, coupled with our patented hypoid gear technology, means you have a cooler operating, more efficient, cleaner, and maintenance-free operation.







Antimicrobial FKM Shaft Isolator seal packed with food grade grease and all stainless steel wearing ring and springs



With our all-new Fortress<sup>™</sup> gearbox, never worry about paint again. The stainless steel cast 304 housing offers resistance to the most caustic environments and the unique contour design reduces the build-up of bacteria in those hard to reach areas.



Flange Mount



Foot Mount



• Torque Arm





• Taper-Grip<sup>®</sup> Bushing

• Shrink Disc

• Keyed Hollow Bore

Solid Shaft

Integral Motor





• Foot



MOUNTING







ASE





### **DUCTILE IRON HOUSING**

Twice as strong as cast iron, making it one of the most rugged bevel gearboxes on the market

### **OPTIONAL TACONITE** SEAL ASSEMBLY

Heavy-duty, fortified, grease purgeable system withstands the most demanding applications



### **TAPERED BEARINGS**

Resist axial and radial loads simultaneously

## **TANDEM DUAL LIP SEALS**

A robust, state-of-the-art, mid-sized family of speed reducers and gearmotors. The Cyclo® BBB4 has a unique

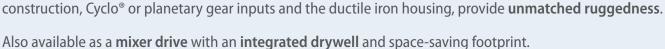
combination of features that result in a highly reliable, efficient, and durable gearbox. The all-steel internal

Prevent leaks and exclude contaminants



### CYCLO<sup>®</sup> DISC

All rotating components are fully hardened, vacuum degassed bearing grade steel, for consistent, reliable performance



Also available as a mixer drive with an integrated drywell and space-saving footprint. BBBH design available for low ratio options.

**B4 CYCLO® BEVEL BUDDYBOX® 4** 

**RIGHT ANGLE SPIRAL BEVEL WITH CYCLO® OR PLANETARY INPUTS** 



Convevor





Mixer

SPECS •









### **ONE PIECE PINION**

Oversized, single-piece pinion provides a robust solution capable of 300% momentary shock-load. Designed and manufactured in the USA.



NO 3

### MOBIL SHC<sup>™</sup> GEAR HI-SHOCK 150

• High-Performance Synthetic Lubricant • Available for Cyclo<sup>®</sup> Products • Extends the Life up to 3 Times • Available 3-Year Warranty



TOROUE Up to 159,983 lb•in (18,076 N•m)



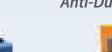
**RATIO RANGE** 11:1 up to 26,000:1 and greater













Solid Shaft





**SPLIT HOUSING** 

Standard in large frame sizes to allow easy maintenance. A large inspection port provides a window for gear inspection. Available in standard gray cast iron with ductile and fabricated steel options.

**TACONITE SEAL** 

This option features a dual-layer oil and grease sealing system.

### **SLOW SPEED SHAF**



### **PARALLEL & RIGHT ANGLE LARGE INDUSTRIAL GEARBOXES**

Paramax<sup>®</sup> parallel and right angle drives are some of the **largest and most durable** power transmission systems operating in the world. The series features double, triple, quadruple reduction gearboxes, global standardization and availability, and support from our worldwide facilities.

Optional accessories: Backstops, Motor Mount Options, Seal Upgrades, Heating & Cooling and Lubrication Solutions, Paint Upgrades, Storage and Packaging Options, and Complete Drive Package Solutions.

### DRIVE PACKAGE







**TIER 1 SUPPLIER ROLLER BEARING** 

High capacity bearings increase load capacity without increasing lead-time. Tapered, double-row spherical, or cylindrical roller bearings depending on size and configuration.



DIAMETER 58mm to 360mm (Hollow & Solid)

• Shrink Disc

• Keyed Hollow Bore





### **CASE CARBURIZED & GROUND GEARING**

High precision carburized gearing with a 25° pressure angle offers a thicker dedendum and higher strength ratings than the typical 20° pressure angle.

### **HIGH TENSILE SHAFT**

Strong shaft material optimized for extended operation in rugged environments.

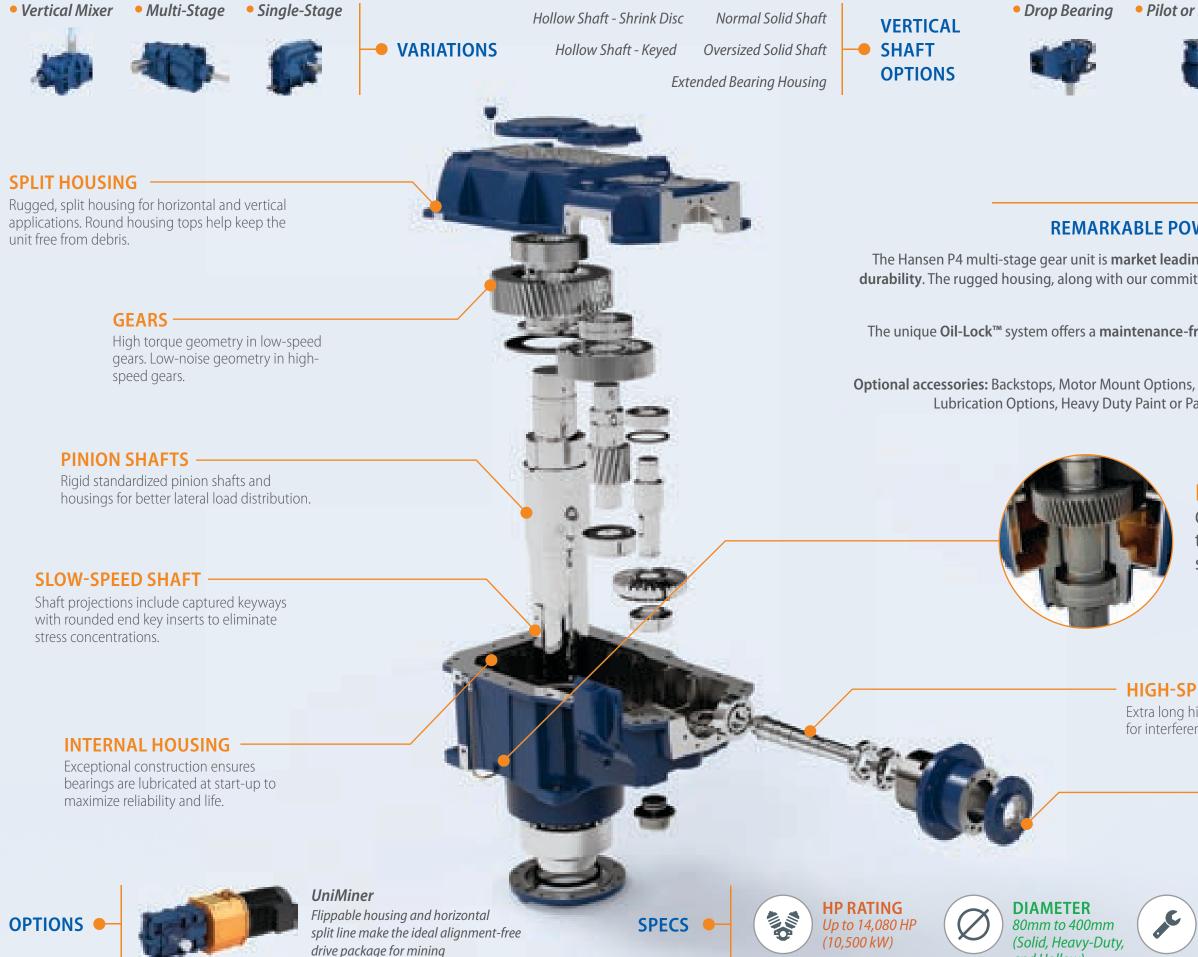




TORQUE Up to 4.9 million lb•in (552 kN•m)



**RATIO RANGE** Up to 500:1 Standard



• Pilot or Flange Mount

Hollow Shaft







### **REMARKABLE POWER AND PERFORMANCE WITH LOW NOISE**

The Hansen P4 multi-stage gear unit is **market leading in quality and technology**, excelling in **reliability and durability**. The rugged housing, along with our commitment to innovating state-of-the-art technology, provides remarkable **power and performance**.

The unique **Oil-Lock**<sup>™</sup> system offers a **maintenance-free** seal on high speed shaft extensions, designed to keep the oil in and dirt out.

**Optional accessories:** Backstops, Motor Mount Options, Multiple Sealing Upgrades, Various Heating, Cooling, and Lubrication Options, Heavy Duty Paint or Packaging Options, and Complete Drive Package Solutions.

### **INTEGRATED DRYWELL**

Cast into 3 and 4 stage vertical housings mean this option provides a truly leak-proof lowspeed shaft.

### **HIGH-SPEED SHAFT**

Extra long high-speed shaft projections suitable for interference-free coupling connections.

### **MAINTENANCE-FREE OIL-LOCK®**

Standard high-speed seal arrangement.

**TORQUE** Up to 9.7 million Ib•in (1.1 million N•m)

and Hollow)



**RATIO RANGE** Up to 630:1 (Custom ratios available) • A-Series

• UA-Series

• C-Series







SERIES

• Output Shaft

• Hollow Shaft



Keyed

**PLANETARY PRE-STAGE** Integrated triple spur gear prestage to extend the ratio range

HOUSING

Multiple housing designs allow for versatile mounting options and a solution that easily integrates into your machine

### **SUN GEAR PINION**

Input shaft driving the planetary prestage. Available in all input styles



### **HIGH PRECISION POINT TO POINT AND TRAVERSE MOVEMENT**

The Fine Cyclo<sup>®</sup> product series are high precision cycloidal gearboxes with zero backlash. These single and double stage gearboxes are highly compact in design, provide long life, and can be optimally integrated into your application. High torsion combined with their low moments of inertia, create ideal solutions for highly dynamic tasks.

A Series - High precision point to point movement. Single stage with high acceleration torgue and bearing capacity.

**C** Series - Large hollow shaft with high precision point to point movement. Fully sealed, single stage gearbox.

**UA Series** - Highly efficient traverse movement. Double stage gearbox with a planetary 1st stage and cycloidal 2nd.



IB-Series



Cyclo<sup>®</sup> Servo 6000

SPECS





DIAMETER Up to 138mm (Hollow Bore)



**SEALS** 



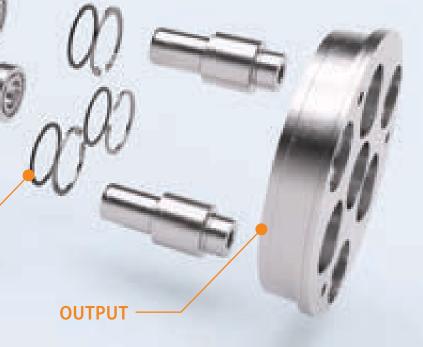
As part of our support in the design phase of new applications, our sizing software Servorun verifies the gearbox selection as well as motor suitability.



### **CYCLO® DISC**

The same proven Cyclo<sup>®</sup> technology found in our industrial reducers, designed and optimized for precision applications where zero backlash is required.

### **ECCENTRIC SHAFTS**







**RATIO RANGE** 29:1 to 283:1

## **OPTIDRIVE E3**

### **GENERAL PURPOSE DRIVE**

Compact, robust, and reliable general purpose drive.

Focused on ease of use, Optidrive E3 provides **unrivaled simplicity** of installation, connection, and commissioning, allowing the user to benefit from **precise motor control** and **energy savings** within minutes.

Available in **IP66/Nema 4X outdoor rating** with tough polycarbonate plastics specifically chosen to **withstand degradation** by ultraviolet (UV), greases, oils, and acids. Also, robust enough not to be brittle at -20°C (-4°F).



Compliant with international standards.



• IP20

Switched Non

• IP66

Non-Switched

• IP66

• IP20





**INTEGRATED DISPLAY** 

LED or multi-language text display.

### **INTEGRATED CABLE MANAGEMENT**

### **PLUGGABLE CONTROL TERMINALS**

**FANS** High quality long-life fans.

## **OPTIDRIVE P2**

### **HIGH PERFORMANCE DRIVE**

High-performance **variable frequency drive** for standard induction and permanent magnet motors.

A **user-friendly interface** and high performance make it perfect for tackling the most demanding applications smoothly.

Extensive I/O and communications **interface capabilities** ensure the drive can be **integrated quickly and efficiently** into a wide variety of control systems.

Dedicated Hoist Mode Operation with motor holding brake control make it perfect for marine and elevator applications.

• 98% Typical Efficiency

• Integral Brake Transistor



### **Altax**<sup>®</sup>

Using our Cyclo<sup>®</sup> technology, the exceptionally robust Altax<sup>®</sup> line is compact and low noise. All models are maintenance free with grease lubrication. Altax<sup>®</sup> caters to a broad range of applications.

Torque: Up to 4,054 lb•in (458 N•m)

Ratio: Up to 1,003:1 HP: Up to 5 HP (3.7 kW)

### **Rhytax**<sup>®</sup>

Right-angle shaft speed reducer. Helical gearing provides low noise and high efficiency in a compact body. It has enhanced optional installation methods: foot, flange, and hollow shaft.

Torque: Up to 74,789 lb•in (8,450 N•m)

Ratio: Up to 545:1 HP: Up to 60 HP (45 kW)



## **Helical Shaft Mount**

Provides a simple and convenient equipment interface by mounting directly on the drive shaft. Uses our patented Taper-Grip® Bushing for quick reducer mounting and removal.

Torque: Up to 388,884 lb•in (43,938 N•m)

Ratio: 5:1, 9:1, 14:1, 20:1, 25:1 HP: Up to 300 HP (224 kW)

### **Custom Gear Drives**

Custom Mill, Planetary, and High-Speed Drives available in a wide range of configurations. Tough, compact, and application specific designs for unique applications including API requirements.

Torque: Up to 6,515,000 lb•in

Ratio: Up to 1,400:1 *Custom ratios available* 

### **Variators**

Beier® Variator offers mechanical stepless speed control with high capacity and long life. Ideal for low horsepower, high torque applications requiring variable speed such as packaging machines.

Torque: Up to 603,620 lb•in (68,200 N•m)

Ratio: Up to 10:1 HP: Up to 200 HP (150 kW)



### **Motors**

EP.NA motors are high performance, exceptionally cool running long lived motors with corona resistant insulation.

- UL, CSA, DOE Compliant Inverter Ready, 10:1 Turndown
- NEMA Premium Efficient Up to 74 HP (55 kW)

### **Encoders**

Two standard incremental types

- 1) For non-brakemotors: AV32 magnetic type.
- 2) For brakemotors, or other uses: HS25A optical design.

Vibration: 5 to 2,000 Hz Shock: 50G, 11 mS duration

Speed: 6,000 RPM **Ingress Rating: IP65** 



## **Additional Services**

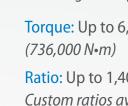


Online product configurator streamlines the selection process, enabling you to build our power transmission products for your specific application. www.SumitomoDrive.com/Configurator



Same day, 1-day, and 2-day shipping on many of our standard products. For more information about Quick Ship, please consult your Sumitomo representative. www.SumitomoDrive.com/QuickShip





### Couplings

Complete line of couplings for a wide range of applications. All couplings are manufactured to the highest specifications, and meet the most rigorous material specifications.

Torque: Up to 57m lb•in (6.4m N•m)

Bore Size: Up to 35in Type: Flexible, Grid and Disc



From transition bases to custom units, we'll have you back up and running.

## Avoid catastrophic failure, minimize risk and increase machine uptime.

## **Retro-Fits and Drop-Ins**

### **Retro-Fit**

### Match existing footprint

A custom transition base will position the new low-speed shaft to be in the EXACT same position as the original low-speed shaft. Our retrofits provide an excellent balance between the cost savings of a standard gearbox and the benefits of minimal on-site modifications.

> Typically, only relocating the motor mount is required for this option.

Options might include a special low-speed shaft diameter or length and motor lantern.

## System Management And **Reliability Technology (SMART)**

SMART is a range of products and reducer options that were developed to help end users in their reliability and asset management initiatives within their plants daily operations.



### **Condition Monitoring**

Fully customizable accurate real time condition data of any piece of rotating equipment.

SAFE

Monitor assets from the safety of your desk via networked connections.

• PREDICTIVE

Machine diagnostics for early warning and detection to avoid failure.

• RELIABLE

Schedule machine downtime to avoid lost production.

EXPANDABLE Multi-reducer monitoring.

\* All DriveSMART<sup>®</sup> options include: Hydroscopic breather with 3mm filter, drain/fill connection for on-line filtration, and oil sample pitot tube port

### SumitomoDrive.com/CycloSmart

### **Drop-In** Match existing unit's critical dimensions

With downtime being such a critical factor in your operation, let us install one of our custom drop-in units.

Installation-ready units are designed specifically to drop-into existing applications with ease.

These stress-free units can have your application back up and running in no time. We offer fabricated steel housings, custom baseplates, custom gearing and shafting and more!

This product will literally drop-in to place; same footprint, same shaft positions!



### **Reliability Monitoring**

Aids consistent collection of data. For Vibration analysis, oil condition and cleanliness testing.\*

OPTIMIZATION Customizable systems to meet many different application needs.

### COST-EFFECTIVE

Lower overall ownership cost.





## Our factory capabilities support all of your gearbox needs.



### **Repairs** Scheduled & Emergency Repair

Repair services for all your related gearbox needs and 24-72 hour turnaround to the original factory specifications and warranty using Sumitomomanufactured parts.

Extended warranty programs are available upon request.

### Root Cause Investigation **(2**)

**Product Support** 

Apply a wide range of approaches, tools and techniques to uncover the causes of your problems.

## Field Services

### For Your Convenience

Most of the services offered and customized training can be performed on location.

## Aftermarket

Our personnel are the industry's most versed gearbox problem solvers. We provide both standard and tailored services, for maximum gearbox life.

### **Experts in Service** Global Support, Local Service

With a vast network of engineers and gearing experts, there is no problem we can't handle.

In addition to our extensive network, LUFTEX Gears Manufacturing and Services provides unmatched capabilities and expertise in the area of custom gearbox repair and service. With a 60-ton crane capacity and 41 ft hook height, no gearbox is too big for us to handle.

Whether custom gear manufacturing or on-site gearbox repair, let our team at LUFTEX keep your operation running.



## **Centers of Excellence**

Our Centers of Excellence offer customers a nationwide support network. From inventory distribution to manufacturing to assembly, we have the team to ensure high quality, responsiveness, on-time delivery, and quick lead times.

### **Chesapeake**, VA

Manufacturing, Support, Inventory, and Training Our Western Hemisphere headquarters has 250,000 sq ft of manufacturing space, and cuttingedge technology. Centralized inventory distribution with a Foreign trade zone (FTZ), focused on inventory optimization, motor assembly, and hands-on training at our Power Institute.

### Verona, VA

**P4** 

**Industrial Gearbox Production** This purpose-built facility is specifically designed to handle the assembly of our large industrial gearboxes.

## **Glendale Heights, IL**

**Gearmotor Assembly and Support** Houses our state-of-the-art paint system for our SHIELD360<sup>®</sup> packages for Cyclo<sup>®</sup>, BuddyBox<sup>®</sup>, and Hyponic<sup>®</sup>.



web: SumitomoDrive.com



### Lufkin, TX

Manufacturing and Services This 32,000 sq ft facility handles gear manufacturing, gearbox repairs, and reverse engineering.

### Corona, CA

**Gearmotor Assembly and Support** Our West Coast location offers repairs and supplies gearmotor products to U.S. customers.

