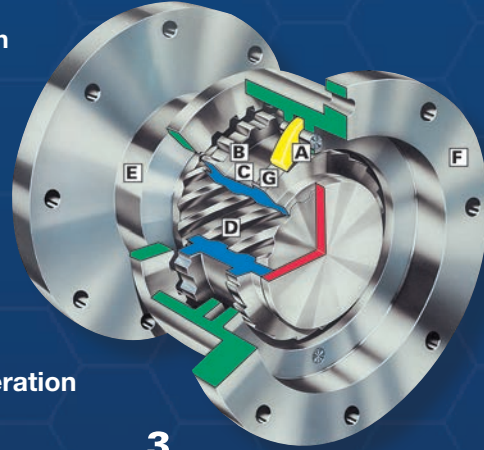


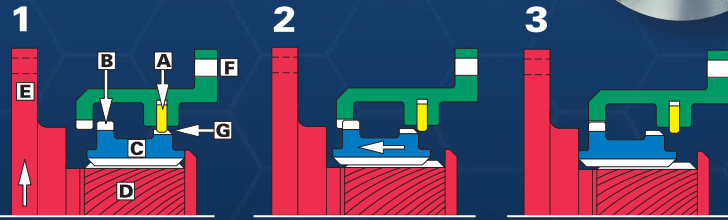
## Dual Driven Equipment Applications for SSS® Clutches

### Elements of Basic SSS® Clutch

- A. Pawl
- B. Clutch Teeth
- C. Sliding Component
- D. Helical Splines
- E. Input Shaft
- F. Output Clutch Ring
- G. Ratchet Teeth



### SSS® Clutch Principle of Operation



## Power Applications

- Single-Shaft, Combined-Cycle Plant
- Cogeneration Plant
- Synchronous Condensing using the Generator of Peak Load Turbines
- Combined Heat and Power Plant (CHP)
- Rotating Uninterruptible Power System (UPS)
- Pumped Hydro
- Auxiliaries:** Gas and Steam Turbine Turning Gears, Gas Turbine Starting

## Petrochemical/Process/Refinery/Pipeline Applications

- Compressors:** Air, Gas, Refrigeration, Process, Pipeline, etc.
- Fans:** ID, FD, Gas Recirculation, etc.
- Pumps:** Amine, Water, etc.
- Hydraulic Power Recovery Turbines**
- PTA Mixers**
- Expander Turbines:** FCC, Gas, etc.
- Steam Turbines:** HP, LP, Back Pressure, Condensing, etc.
- Gas Turbines**

## Seventy Plus Years of Designing and Building High Power Clutches 36,000+ SSS® Clutches Supplied Worldwide

- 400 MW** Highest Power SSS® Clutch
- 17,000 rpm** Highest Speed SSS® Clutch
- 1,100+** SSS® Clutches for Power Plants (Synchronous Condensing and Combined Cycle)
- 100+** SSS® Clutches for Combined Heat and Power (CHP) in 14 Countries
- 25,000+** SSS® Clutches for Starting and Turning Gear Systems
- 1,500+** SSS® Clutches for Uninterruptible Power Supplies
- 4,000+** SSS® Clutches for Naval and Marine Applications
- 700+** SSS® Clutches for Pumps
- 275+** SSS® Clutches for Fans
- 300+** SSS® Clutches for Compressors



### SSS Clutch Company, Inc.

Application Engineering  
Sales and Aftermarket Service in North  
and South America

610 West Basin Road, New Castle  
Delaware 19720, USA

(302) 322-8080  
engineering@sssclutch.com  
www.sssclutch.com



### SSS Gears Limited

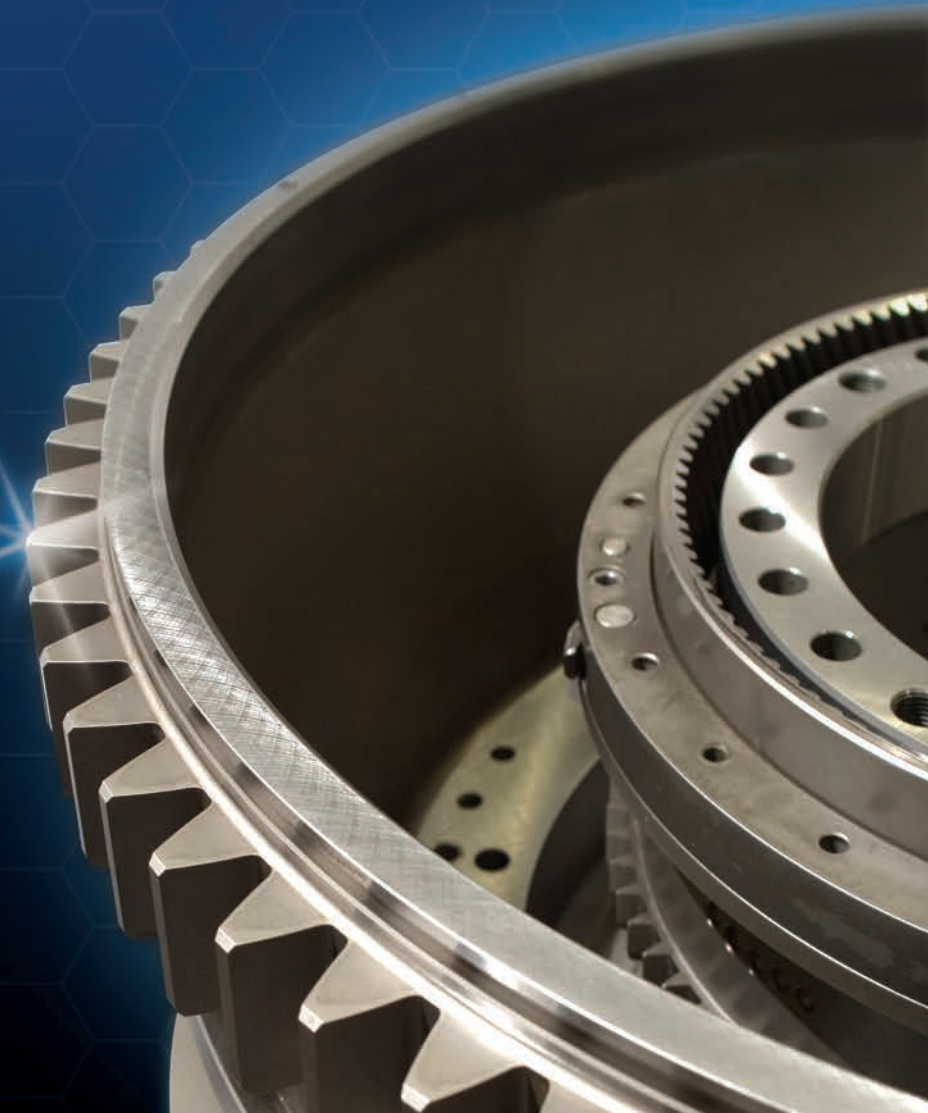
All clutches are designed, built  
and tested in the UK Factory.

Park Road, Sunbury-on-Thames  
Middlesex TW16 5BL, England

+44 1932 780644  
engineering@sssgears.co.uk  
www.sssgears.co.uk

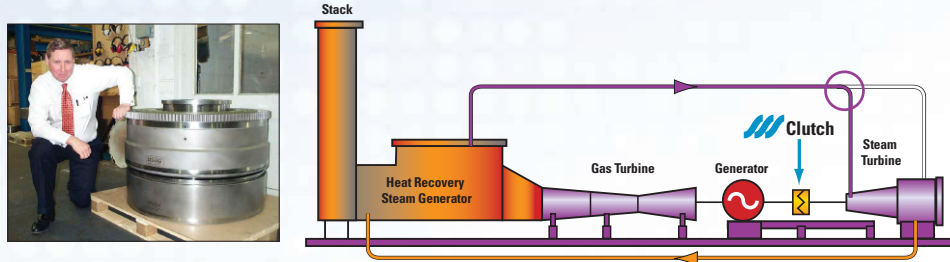


# SSS® Clutch Capability



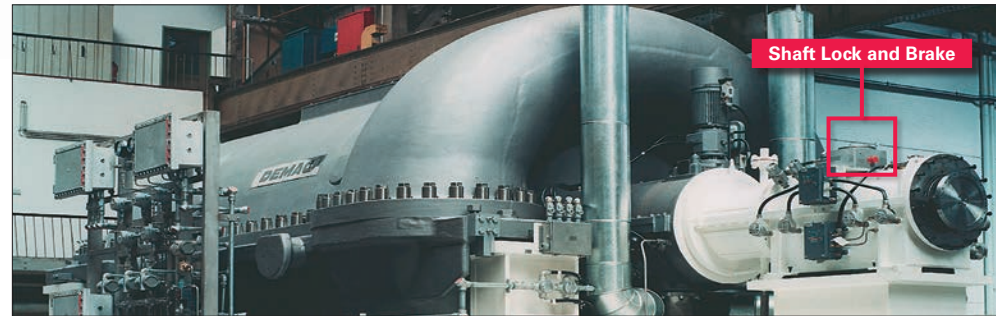
## Single Shaft—Combined Cycle Generators

Over 400+ SSS® Clutches in 48 Countries for Combined Cycle Applications



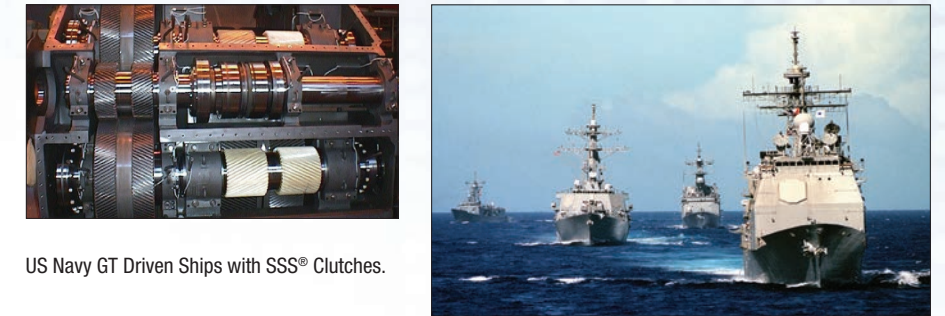
## Compressors for Power Recovery

An SSS® Clutch Improves Availability by Disconnecting Power Recovery Turbine



## Typical COGAG Gearing

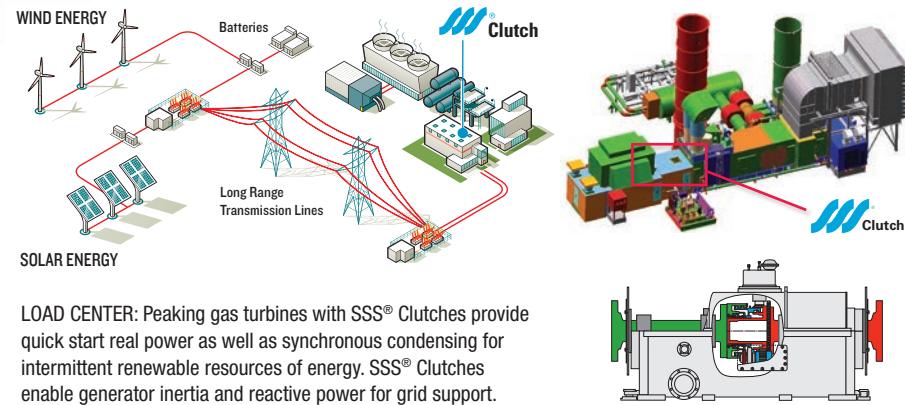
50 Navies Worldwide use SSS® Clutches



US Navy GT Driven Ships with SSS® Clutches.

## Synchronous Condensing/Spinning Reserve/Grid Inertia

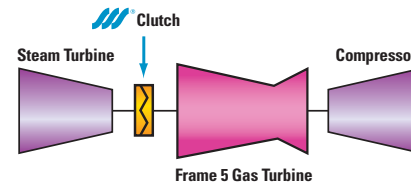
Maximizing the Contribution of Renewable Sources of Energy



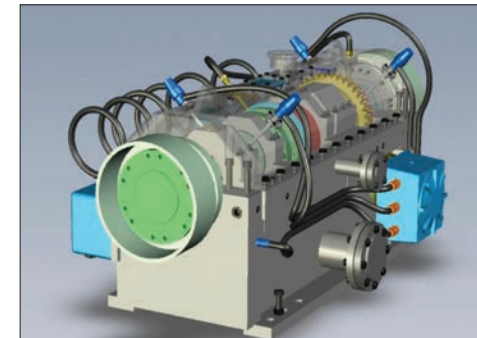
LOAD CENTER: Peaking gas turbines with SSS® Clutches provide quick start real power as well as synchronous condensing for intermittent renewable resources of energy. SSS® Clutches enable generator inertia and reactive power for grid support.

## Compressor Clutch with Integrated Turning Gear

Starter/Helper Steam Turbine for Ethylene Charge Gas Compressor

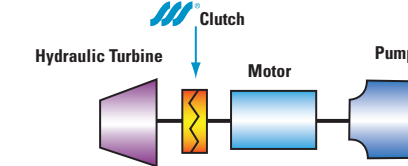


80T encased SSS® Clutch with turning gear and input shaft brake rated at 6 MW @ 5100 rpm.

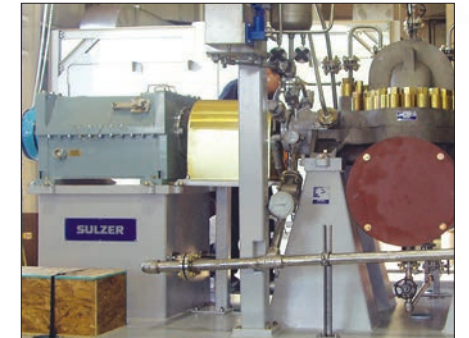


## Pumps

Self Lubricated SSS® Clutches for Dual Driven Pumps

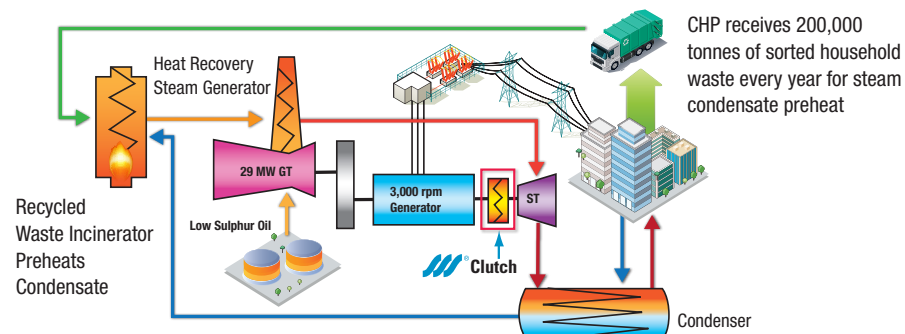


Size 36 encased, self lubricated SSS® Clutch connects a 2000 kW at 2980 rpm hydraulic turbine to a motor driven pump for energy recovery.



## Combined Heat and Power Applications

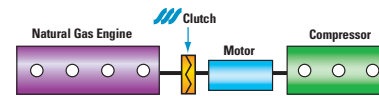
100+ SSS® Clutches in 14 Countries for CHP Plant



CHP receives 200,000 tonnes of sorted household waste every year for steam condensate preheat

## Compressors in the Pipeline Industry

Peak Load Power Savings for Natural Gas Pipeline Compressors

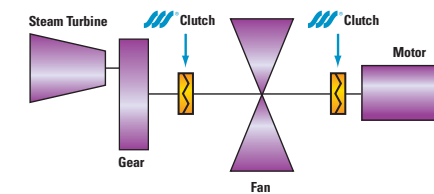


Package showing SSS® Clutch installed between the engine (yellow) and the electric motor, with compressor on the far right (blue).



## Fans

SSS® Encased Clutch for Dual Driven Fan on Rentech Boiler



Size 68T encased, pressure lubricated SSS® Clutches supplied for 900 hp at 1800 rpm Robinson fans.

