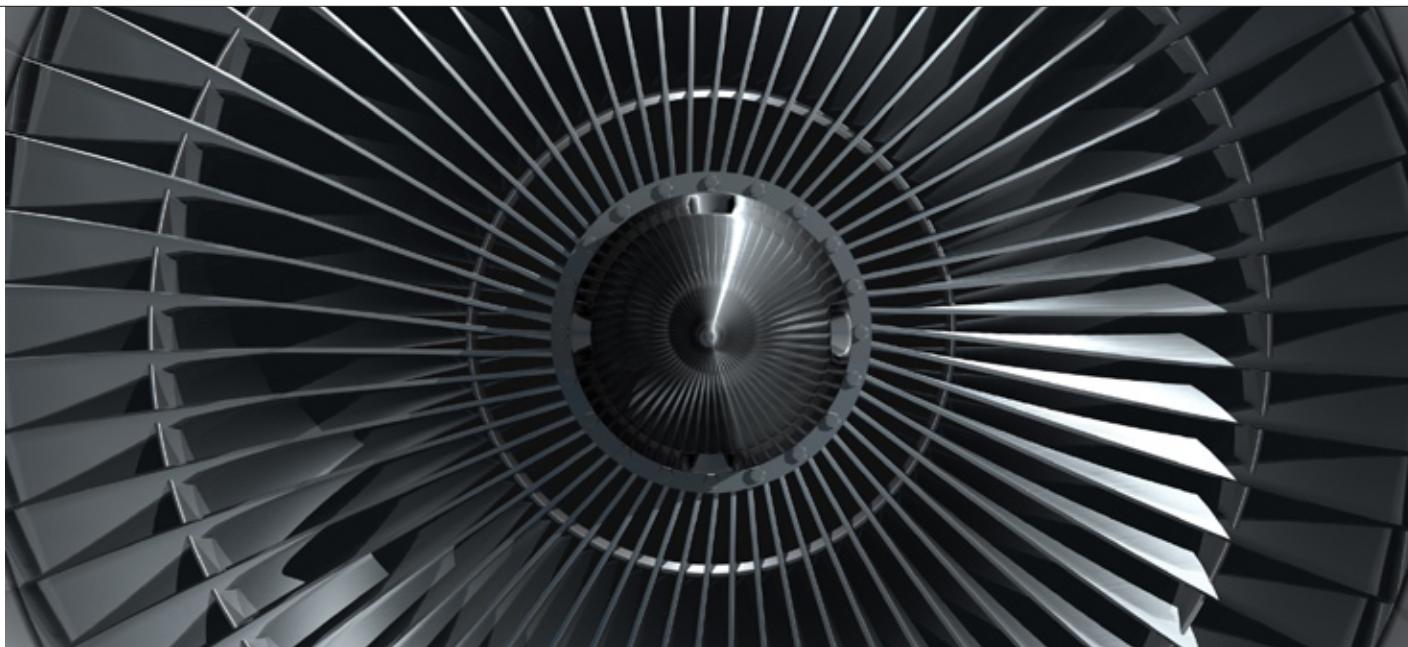


**SCHERZINGER**  
PUMP TECHNOLOGY





## About Scherzinger

**Since 1937 Scherzinger has specialized in the development, design, and optimization of Gear Pumps, Flow Dividers and Valves.**

Scherzinger products offer intelligent solutions for very individual and specific requirements in the energy industry. Decades of experience in development and production of Flow Dividers and Valves ensure optimum customer benefits.

Scherzinger is certified after ISO 9001, VDA 6.1 and ISO 14001 since 1993 – assuring best quality.

## Service

### Delivering results due to...

- Comprehensive product consultancy and service
- Professional and competent development team
- Highly innovative thinking
- Realization of specific and customized concepts for high-tech applications
- State-of-the-art production methods and processing of a wide range of materials
- Complete verification and extensive testing prior to delivery

**Scherzinger provides an extensive range of specialists to support OEM's, plant owners and operators of Gas Turbines worldwide.**

Due to a worldwide network of representatives Scherzinger can continuously provide you with:

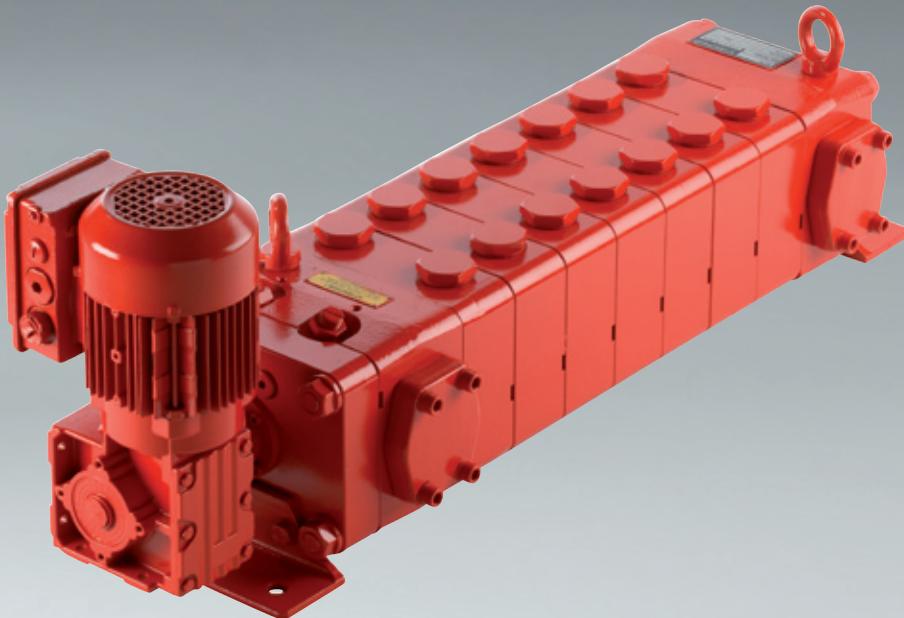
- Complete repair and overhaul
- Technical support and expertise
- Information and training service
- Retrofitting and upgrading

## Repair and Exchange program

**As a consequence of long term experience and expertise all Flow Divider repairs are maintained at the Scherzinger Head Office. In order to assure you reliable performance, each repaired unit passes the same test procedure like any new unit.**

Depending on your requirements Scherzinger offers you different repair possibilities:

- Individual evaluation of your used unit including inspection report and competitive quotation
- Flow divider exchange program for short delivery intervals including possible upgrading (upon request)



The Flow Divider consists of multiple gear pump elements with a single inlet and multiple outlets in a linear double element arrangement.

- All double gear pump elements have one drive gear and two driven gears, rotating in the gear chamber with small diametral and lateral clearances.
- Every drive gear is connected to the other by coupling bushes to synchronize the speed of all gear pump elements.
- Each gear pump element is driven by the fuel stream and therefore

directly proportional to the speed of the Flow Divider.

- As a consequence each fuel nozzle of the gas turbine is provided with the same fuel quantity.

Operating Range:

Design Principle:

|                        |   |
|------------------------|---|
| Designed for:          | GE Frame 6B, GE Frame 6C, GE Frame 6FA, GE Frame 7FA, GE Frame 9E, GE Frame 9FA |
| Number of elements:    | 6; 10; 14; 18   |
| Flow rate per element: | 75 l/min (19.8 GPM) at 2000 RPM   |
| Operating pressure:    | 96 bar (1400 psig)  |
| Fuel temperature:      | Max. 130 °C (266 °F)  |
| Fuels:                 | Distillate, Heavy Fuel, Crude, Naphtha  |
| Starter motor:         | Optional (available in various types)   |



## Circular Flow Divider



The Flow Divider consists of multiple gear pump elements with a single inlet and multiple outlets in a circular arrangement.

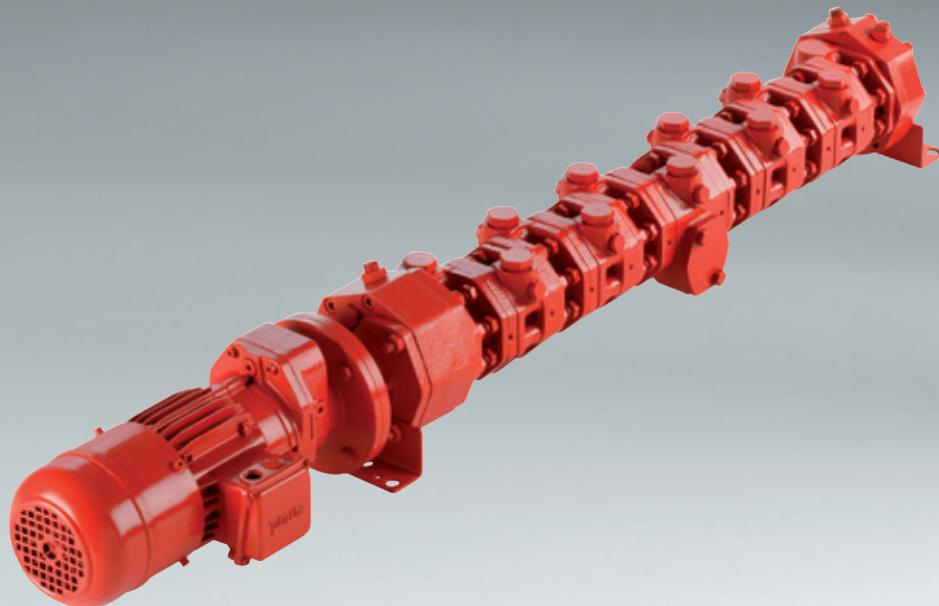
- All gear pump elements are equipped with two driven gears, rotating in the gear chamber with small diametral and lateral clearances.
- Every driven gear is connected to the other by a central sun gear to synchronize the speed of all gear pump elements.
- Each gear pump element is driven by the fuel stream and therefore directly proportional to the speed of the Flow Divider.
- As a consequence each fuel nozzle of the gas turbine is provided with the same fuel quantity.

### Operating Range:

### Design Principle:

|                         |   |
|-------------------------|---|
| Designed for:           | GE Frame 6B,<br>GE Frame 7E, GE Frame 9E, GE Frame 9FA      |
| Number of elements:     | 10; 14; 18  |
| Flow rates per element: | 30.3 l/min – 75 l/min<br>(86 GPM – 19.8 GPM) at<br>2000 RPM |
| Operating pressure:     | 83 bar – 103 bar<br>(1200 psig – 1500 psig)                 |
| Fuel temperature:       | Max. 130 °C (266 °F)  |
| Fuels:                  | Distillate, Heavy Fuel,<br>Crude, Naphtha                   |
| Starter motor:          | Optional<br>(available in various types)                    |





The Flow Divider consists of multiple gear pump elements with a single inlet and multiple outlets in a linear arrangement.

- All gear pump elements have one drive gear and one driven gear, rotating in the gear chamber with small diametral and lateral clearances.
- Every drive gear is connected to the other by coupling bushes to synchronize the speed of all gear pump elements.
- Each gear pump element is driven by the fuel stream and therefore directly proportional to the speed of the Flow Divider.
- As a consequence each fuel nozzle of the gas turbine is provided with the same fuel quantity.

## Operating Range:

## Design Principle:

|                        |  |
|------------------------|--|
| Designed for:          | All GE Frame 5 and GE Frame 6          |
| Number of elements:    | 2; 4; 6; 10; 12; 14; 18                |
| Flow rate per element: | 12.8 l/min (3.4 GPM) at 2400 RPM       |
| Operating pressure:    | Max. 103 bar (1500 psig)               |
| Fuel temperature:      | Max. 130 °C (266 °F)                   |
| Fuels:                 | Distillate, Heavy Fuel, Crude, Naphtha |
| Starter motor:         | Optional (available in various types)  |



## Valve Assembly



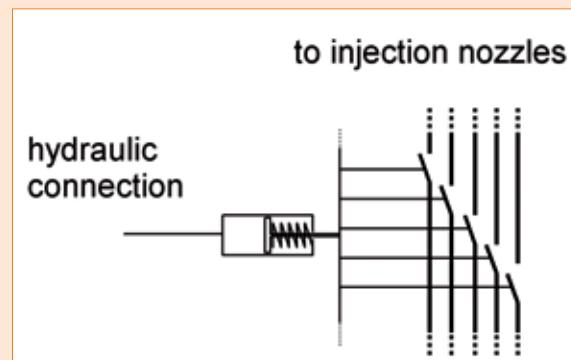
The valve consists of multiple valve cartridges in a circular arrangement.

- The cartridges are operated by one common central hydraulic cylinder.
- At initial state the cartridges are “closed” by spring force and the pressure load of the fuel.
- When the hydraulic cylinder is actuated all valve cartridges are opened at the same time, to release the flow of the fuel to all combustion chambers.

Operating Range:

Operating Principle:

|                        |  |
|------------------------|--|
| Designed for:          | GE Frame 6B DLN,<br>GE Frame 9E DLN,<br>GE Frame 9FA DLN |
| Number of elements:    | 10; 14; 18   |
| Operating pressure:    | 96 bar (1400 psig)                                       |
| Differential pressure: | 3.5 bar (50 psig)  |
| Fuel temperature:      | Max. 130 °C (266 °F)                                     |
| Fuels:                 | Distillate   |





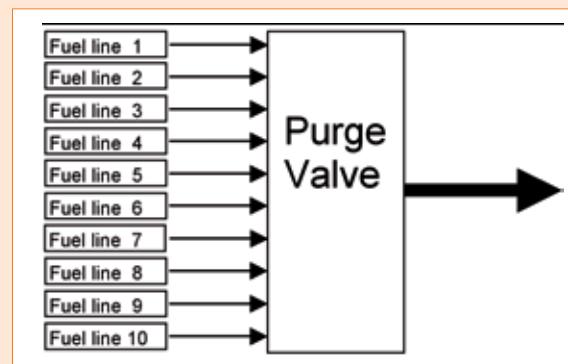
The Purge Valve is used on gas turbines operated on liquid fuel.

- The valve consists of a multi ported casing where each port is connected to one fuel line, between the Flow Divider and the nozzle of the gas turbine.
- By rotation of a sealing disc all connected lines are either sealed or opened into one common drain connection.
- The valve can be operated either hydraulically, manually, or as an alternative pneumatically.
- With this purge valve all fuel lines between the Flow Divider and the nozzles can be purged – e.g. when the fuel is changed from liquid to gas, or when the turbine is shut down.

## Operating Range:

## Operating Principle:

|                     |  |
|---------------------|--|
| Designed for:       | All turbine frames                     |
| Number of elements: | 10                                     |
| Operating pressure: | 84 bar (1230 psig)                     |
| Fuel temperature:   | Max. 150 °C (302 °F)                   |
| Fuels:              | Distillate, Heavy Fuel, Crude, Naphtha |





Automotive

Chemical

Energy

Medical

Transfer and Lube

Services

**SCHERZINGER**  
P U M P   T E C H N O L O G Y

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