

# SchuF Fetterolf Automatic Recirculation Valves PUMPENSCHUTZVENTILE



# Company Profile

*“Every SchuF valve is an innovation in itself”*

Wolfgang Frank  
Chairman, SchuF Fetterolf Group

For over 100 years SchuF valves have stood for innovation and quality at the highest level.

Together with our customers, we invent, design and manufacture valves customised to exact tolerances, processes or special operating conditions. SchuF Fetterolf valves can be found in standard and in many severe service applications in the Chemical, Polymer, Pharma, Oil, Gas, Offshore and Refining industries.

## ... Innovation

The invention of the Lift Plug valve in 1911 and piston & disc bottom outlet valves in the nineteen twenties by the founder of SchuF – Josef Frank – were the first of a long line of valve inventions and innovative designs. Continuing research and development in materials (used in valve bodies and trim), design as well as complex processes enable SchuF today to offer valve solutions for applications with high pressure, high temperature and difficult media; or a combination of all three.

The integration of Fetterolf Corporation in 2004 further broadened the Group’s product portfolio, innovation and geographical reach. Today the SchuF Fetterolf product line includes control, isolation, sampling, switching and safety related valves.

## ... Quality

The exceptional quality and longevity of SchuF Fetterolf valves is a result of the precise attention to process detail, creative design, and the use of the appropriate high quality materials. In addition to its own high internal company standards, SchuF is ISO 9001, GOST and PED certified and can manufacture according to ASME, DIN, NACE, API, Fire Safe, GMP, JIS or any other internationally recognised standard.

## ... Worldwide presence

SchuF Fetterolf is represented in over 65 countries worldwide and has design and production facilities in Germany, Ireland, India, Brazil, the United States and the United Kingdom.

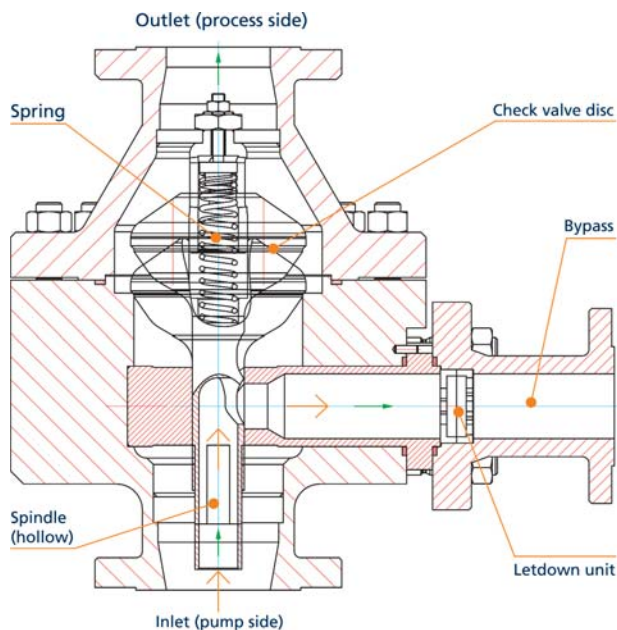


## Automatic Recirculation Valve (ARV) – Model 78

Automatic recirculation valves have the primary purpose of protecting centrifugal pumps by assuring minimum flow through the pump at all times.

### Purpose

They replace conventional multi valve pump protection solutions which have proven to be costly or inefficient. The automatic recirculation valve approach unites the check valve, the automatic bypass control valve and pressure letdown functionality in a single valve body.



*SureFlo™ design*

### Mode of Operation

The automatic recirculation valve is installed in the pump discharge line in the position of the main check valve that it replaces. The valve opens as soon as the pump builds sufficient flow to move the internal valve disc in the main line into an open position. Decreasing flow through the valve causes the spring loaded disc to return to its seat closing the process outlet. At the same time the bypass outlet is uncovered allowing a minimum flow of liquid to be routed back to the pump.

*A full brochure is available at: [www.schuf.com/pdf](http://www.schuf.com/pdf)*

### Key Features:

- Standard sizes up to 16" (DN 400) and ASME 4500#
- Automatic bypass operation
- Non return function
- Modular design
- Custom pressure letdown in bypass
- No power or air pressure required
- Offshore design available



### ARV Product Range

SchuF Fetterolf has a broad range of ARV designs to meet most applications. The **SureFlo™** design is suitable for line sizes up to 10" and ASME 2500# pressure class. The **HighFlo™** goes to 24" and ASME 4500#, whilst the **ControlFlo™** is more suitable for high pressure applications where multistage letdown or enhanced bypass sealing is required.

### ARV Pump Applications

- General centrifugal pumps
- Boiler feed water pumps
- Cooling plant feed pumps
- Crude oil pumps
- Fluid gas pumps (LNG, LPG etc.)
- Process liquid pumps
- Booster pumps
- Seawater injection pumps
- Fire fighting pumps

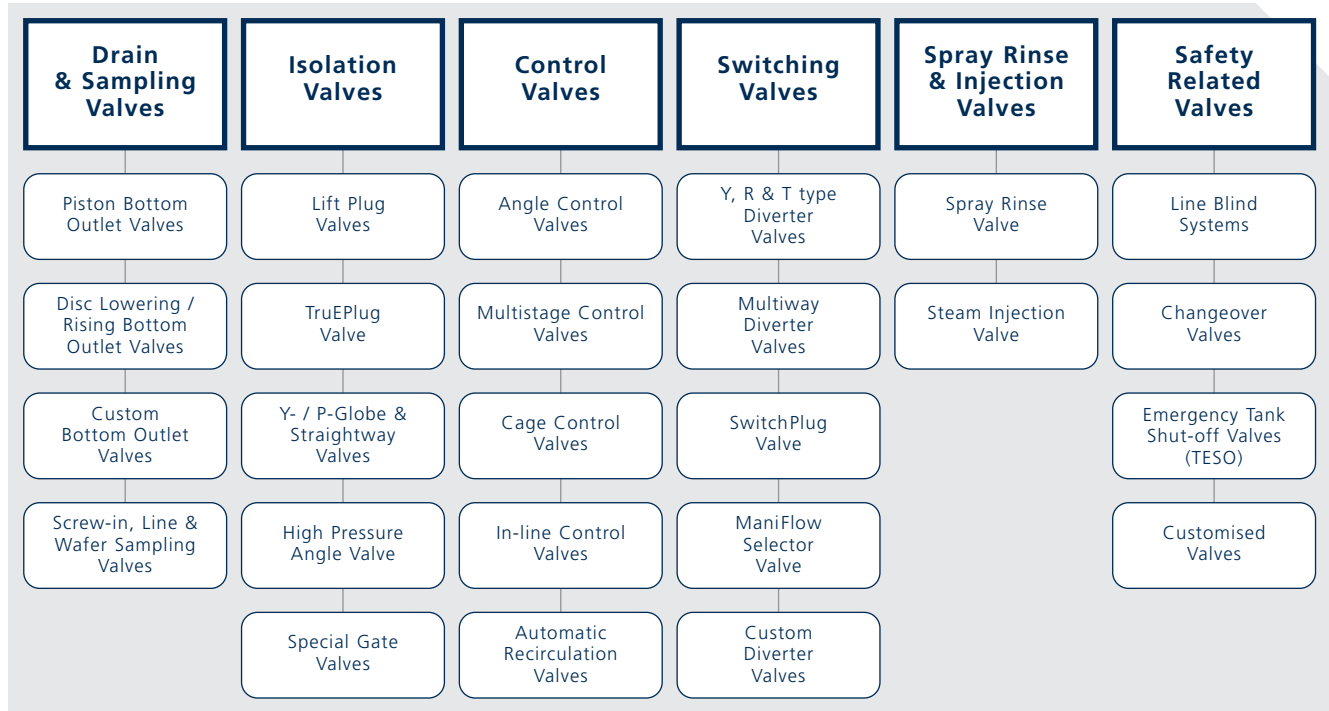
# Product Portfolio Overview

SchuF Fetterolf has delivered over one million valves during its 100 year history to a wide variety of industries in over 50 countries worldwide.

Headquartered near Frankfurt in Germany, the company has additional design and manufacturing centres in Brazil, India, Ireland, UK and the USA.

The SchuF group has sales and agent offices covering almost every country in the world.

We manufacture valve products that control, isolate, divert, and sample liquids, gases, powders, and slurries. Our product range of engineered, customised valves includes:



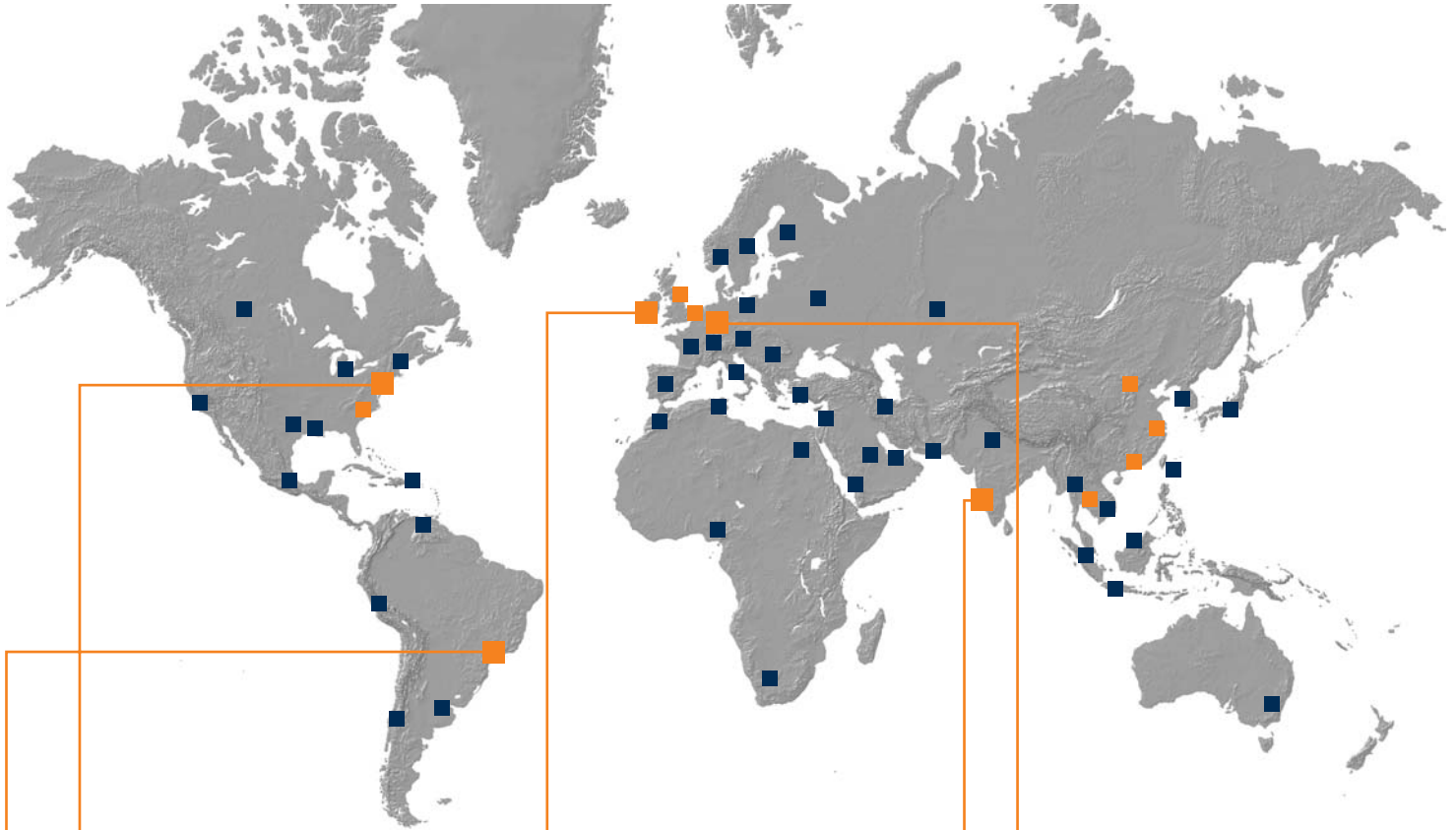
## Key Client List:

- |                  |                     |                  |
|------------------|---------------------|------------------|
| ■ AkzoNobel      | ■ Glaxo Smith Kline | ■ Reliance       |
| ■ AstraZeneca    | ■ INEOS             | ■ Roche          |
| ■ BASF           | ■ Invista           | ■ SABIC          |
| ■ Bayer          | ■ Jiangsu Hengli    | ■ Saipem         |
| ■ BP             | ■ Lanxess           | ■ Salavat        |
| ■ Chevron        | ■ LG Chemical       | ■ Samsung        |
| ■ Clariant       | ■ Linde             | ■ Sandoz         |
| ■ DOW Chemical   | ■ Lukoil            | ■ Sanofi Aventis |
| ■ Du Pont        | ■ Lurgi             | ■ Shell          |
| ■ Eastman        | ■ Merck             | ■ Shin Etsu      |
| ■ Evonik         | ■ Novartis          | ■ Sinopec        |
| ■ Exxon Chemical | ■ Oerlikon          | ■ Sulzer         |
| ■ FCFC           | ■ Oxy Vinyls        | ■ Temex          |
| ■ Far Eastern    | ■ Pemex             | ■ Tuntex         |
| ■ Foster Wheeler | ■ Petrobras         | ■ Uhde           |
| ■ GE             | ■ Pfizer            | ■ Vinnolit       |





# SchuF FETTEROLF Worldwide



[www.schuf.com](http://www.schuf.com) · [www.schuf.de](http://www.schuf.de)

## USA



**Fetterolf Corporation**  
phone: +1 610 584-1500  
fax: +1 610 584-5904  
info@fetterolfvalves.com

**SchuF (USA) Inc.**  
phone: +1 843 881 3345  
fax: +1 843 881 6121  
sales@schuf.us

## IRELAND



**SchuF Valve Technology GmbH**  
phone: +353 (0)21 4837000  
fax: +353 (0)21 4837030  
sales@schuf.ie

## GERMANY



**SchuF Chemieventile Vertriebs GmbH**  
phone: +49 (0)6198 571100  
fax: +49 (0)6198 571200  
verkauf@schuf.de

## BRAZIL



**SchuF Fetterolf do Brazil Ltda**  
phone: +55 19 39369090  
fax: +55 19 39353215  
fbvendas@fetterolf.com.br

**Your Local Agent:**

## INDIA



**SchuF Speciality Valves India Pvt. Ltd.**  
phone: +91 421 2264600  
fax: +91 421 2362018  
sales@schuf-india.com