

# Valve Selection Do it **ONCE**, Do it **Right**!

**If you are continuously replacing or maintaining valves in your plant, then correct Severe Service Valve Selection can save you money and gain production time.**

In this day and age, plants are pushed harder for longer with plant shutdowns being pushed further and further apart to maximise productivity and minimise down time. This puts extra demand on plant components such as pumps, compressors and valves to work more reliably for longer. So, when we are talking about valves, a good valve selection criterion is critical, and even more so when it comes to **severe service** applications.

A **severe service** application could be defined as having one or a combination of the following parameters: -

- a) High pressure or high pressure drop.
- b) High temperature
- c) Solids content – slurry
- d) Corrosive
- e) Lethal / toxic – high concern over leakage to atmosphere

**The main causes for valve failure in such applications are: -**

1. Obstructions – discs, stems, gates, plugs - due to erosion from the solid content in the slurry due to being in the flow path.
2. Cavities – valves seats in gate and knife gate valves and dead spaces in ball and control valves - allows areas for product and scale to build up thus preventing opening / closing or sealing.
3. Flow path – right angle or globe valve pattern designs – increased wear due to tortured flow path, increased velocity, pressure drop and potential vibration.
4. Material selection – correct material selection is imperative to prolonging valve life.





# So how do we provide the best, most reliable valve for the application when it comes to severe service applications?

Big Taps Valve Consultants partners with Schuf Germany who have over one hundred years' experience in providing valves for some of the most arduous applications imaginable. They have worked with some of the world's largest end users in the mineral processing, oil and gas, petrochemical and power generation industries to provide high quality, long lasting solutions in applications such as: -

- Bauxite processing
- Coal gasification / liquefaction
- High pressure acid leach
- Pressure acid leach
- Hydrocracking
- Autoclave letdown
- Delayed coking
- Resurge and flare gas control
- Urea reactors
- PET, PVC, PE and PP processing and many more

All of their products take into account the four main causes for valve failure to provide the optimal solution for the application and as such: -

1. **Minimise obstructions** – due to being full bore wherever possible
2. **Eliminate cavities** - Stagnant areas are minimized to prevent build-up of slurry or scale, including piggable designs
3. **Provide a smooth, less turbulent flow path** – Valve bodies are designed to help extend service life, by preventing impingement of particles on internal surfaces.
4. **Provide optimum material selection** – work hand in hand with our customers to ensure that the best material for the application is selected.

**Will buying a Schuf valve cost you more initially than the valve you are currently using? Probably.**

But when you take into account:

- Cost of replacement valves;
- Downtime / loss of production;
- Safety concerns due to disassembly of pipework in hazardous applications;
- Labour costs – increased maintenance labour costs for replacing valves regularly;
- Additional equipment – cost of hiring, using heavy lifting equipment for removal of the failed valve and installation of the new one;
- Repair costs if applicable;

the long term cost of purchasing a Schuf valve will be much more economical.

**Continuously replacing or maintaining lower spec' valves is a false economy. Talk to your Big Taps Valve Consultant about increasing the reliability and safety of your operation.**



Lift Plug Valves



Changeover Valves



Y-Globe Valves



Automatic Recirculation Valves



TruEPlug Valve



Disc Bottom Outlet Valves



Line Blind Valves



Ram Bottom Outlet Valves



Sampling Valves



Spray Rinse Valves



Control Valves



ManiFlow Selector Valve (MSV)

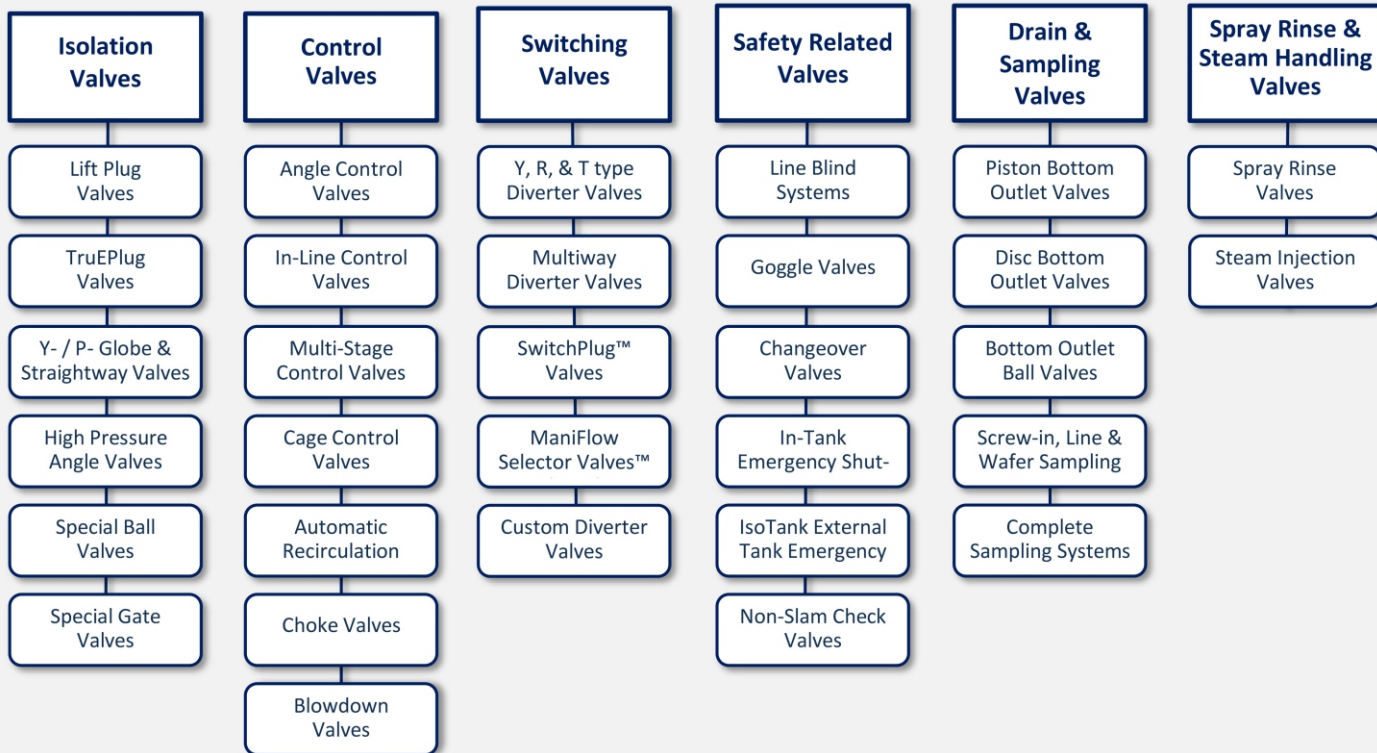


Multi-Way Diverter Valves



Alumina Valves

## SchuF's valve range can be arranged by the following categories



## Some of SchuF's key customers:

- ABB Lummus
- Aker Solutions
- Akzo
- Alcan
- Alumar
- Alcoa
- Alunorte
- Astra Zeneca
- BASF
- BAYER
- Boehringer Ingelheim
- Borealis
- BP Chemical
- BP Offshore
- Braskem
- Bristol-Myers Squibb
- Chang Chun
- Changzhou
- Chevron
- Chimex
- Chiyoda
- Ciba
- Clariant
- Conoco Phillips
- CTCL
- Daewoo
- Dalian Refinery
- Degussa
- Dow Chemical
- DuPont
- Eastman
- Eli Lilly
- E.ON
- Emarat
- Emerson
- Evonik
- Exxon Chemical
- Exxon Maritime
- Far Eastern
- Formosa Plastics
- GE
- Glaxo Smith Kline
- Honeywell
- Hubei
- Hydro
- Hyundai
- Ibn Rushd
- ICI
- Indorama
- INEOS
- Interquisa
- Invista
- Jindal
- Jinshan
- Jordan Phosphate
- Kaixiang
- Kala Naft
- Kimberly Clarke
- Lanxess
- LG Chemical
- Linde
- Lonza
- Lukoil
- Lurgi
- LyondellBasell
- Merck
- Mitsubishi
- Monsanto
- Nan Ya Plastics
- Nestle
- Novartis
- NPZ Moscow
- OPC
- Oxiteno
- PDVSA
- Pemex
- Petrobras
- Pfizer
- Phillips-Upjohn
- PPTA
- Reliance
- Remondis
- Rhone Poulenc
- Roche
- SABIC
- Saipem
- SamNam
- Samsung
- Sanofi Aventis
- Sasol
- Schering
- Shanghai Refinery
- Shell
- Shenhua
- Siemens
- Sinopec
- Solvay
- Sulzer
- Taekwang
- TECO
- Temex
- ThyssenKrupp
- Uhde Inventa Fischer
- Urumqi
- Vinnolit
- Wacker
- Wyeth
- Yangzi
- Yisheng
- Yongchen
- Yuenyang