

### MINING & MINERALS

Valves • Actuators • Automation Technology





## TOGETHER WE CREATE SOLUTIONS.

#### **EXPECT COMMITMENT**

We are committed in each and every supply, day by day, year after year. First class product quality can be expected. Our commitment does not end when the products exit our facility. We are just as committed to serve our customer after the products have been in service for years or even decades.

#### **SHAPED BY CUSTOMERS' REQUIREMENTS**

EBRO and Stafsjö are globally recognized leaders in manufacturing valves, actuators and automation technology. EBRO, a family-owned business with over 1,000 employees, delivers state-of-the-art butterfly valves, actuators and automation technology through its international network of subsidiaries, sales offices and production facilities.

In 2005, Stafsjö joined the group, bringing almost hundred years of knife gate valve competence and experience. Together, across the globe, we create and supply innovative and durable valve and automation solutions that are shaped by our customers' requirements.

#### **MAKE A DIFFERENCE**

Our customers depend on the performance and reliability of our products to enhance their productivity, efficiency and safety. We understand the crucial nature of the applications. Our promise is to take a collaborative approach, working hand in hand with our customers to create tailored solutions that not only meet but surpass their expectations. Our team around the world is a dedicated resource that you can rely on.





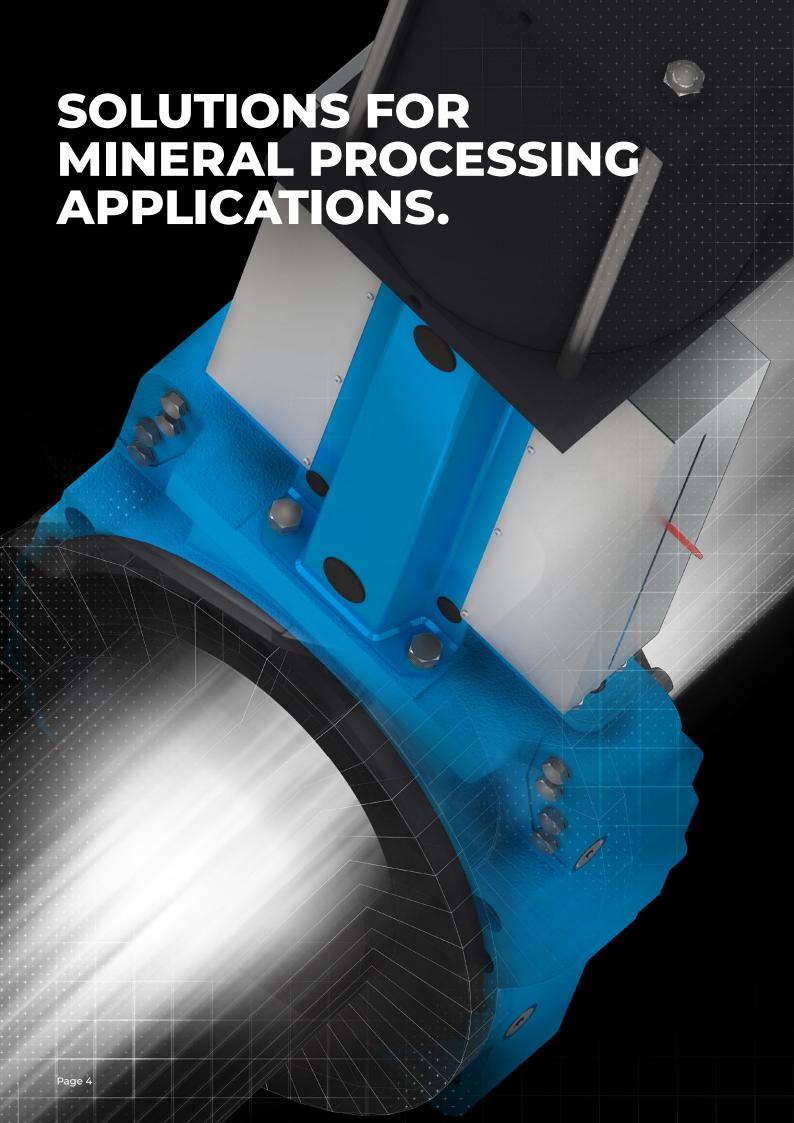
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# VALVE SELECTION GUIDE.

Choosing appropriate valve type and shut-off technique have significant impact on valve service life. Often, detailed information is needed to make correct valve selection. The following guide can serve as an initial reference in the valve selection process.

The global teams at EBRO and Stafsjö are available to provide support with their products and expertise.

APPLICATION	SLV	SLF	SLH SLX	MV	HG	WB11 WB14	WB14E	Z011-A Z014-A	Z411-A Z414-A	F012-A	T211-A T214-A	HP 111 HP 114
Dirty water < 5 % solids	(■)			•		•	•	•	•			
Slurry 5 % - 30 % solids	•	•	•	(■)	-							
Slurry > 30 % solids	•	•	•		•							
Grinding circuit and Hydro cyclone isolations	•	•										
Separation by flotation, magnetic	•	•		(■)	•	(■)	(■)	•		•	•	•
Thickener   Paste plant   Settlers   Filters	•	•			•							
Tailings feedline	•	•	•		•							
High pressure tailings feedline			•									
Process water   Process recovery water	(■)			•		•	•	•	•	•		•
Chemicals Corrosive media				•	•		•	•		•	•	•
High temperature and high pressure												•
Powder   Granulate				•	•			•		•		
Gas   Blowers								•		•		



#### **PUSH THROUGH SLURRY VALVES**

Stafsjö's push through slurry valves covers several pressure classes making the range complete for both the concentrator plant and the tailing system.

The valves are modular designed and can easily be customized with actuators and related automation accessories to different process conditions.

The compact slurry valve SLV is typically used in the sizing process on hydro cyclone clusters, as isolation valve around slurry pumps and tanks. As an option for applications with extreme solid content or severe wearing applications, especially within the primary grind circuit, we recommend the heavy duty SLF push through slurry knife gate valve.

For the tailing system and long distance pumping, the high pressure slurry valves SLH or SLX are normally required, which are available in pressure class up to 50 bar (725 psi).

The push through slurry knife gate valves provides superior flow characteristics, reliable and bi-directional shut-off performance in the most abrasive and demanding mineral processing applications.



SLH / SLX Bi-directional DN 80 – DN 650 (NPS 3 – 26)

SLV Bi-directional DN 50 – DN 900 (NPS 2 – 36)

SLF Bi-directional DN 80 – DN 800 (NPS 3 – 32)

#### OTHER KNIFE GATE SOLUTIONS

Our knife gate valves have evolved during decades and stretches from DN 50 (2") up to DN 1800 (72"). In addition to push through slurry valves, we also have a wide selection of other shut-off techniques and materials to choose from.

For the concentrator plant's process water we recommend any of the the full bore and perimeter seated valves within the WB, WB11, WB14 or WB14E range. The fully lugged versions are also an option for the pipe drain systems. For acid duties high grade MV or WB14E in materials such as duplex, super-duplex or 254 SMO are available options.

The **HG** knife gate valve offers a unique through-going shut-off technique, combined with wear resistant polyurethane seats making it an option to push through slurry valves in the concentrator plant.



**WB, WB11 & WB14**Bi-directional
DN 50 – DN 1600 (NPS 2 – 64)



WB14E Bi-directional DN 50 – DN 750 (NPS 2 – 30)



MV Uni-directional DN 50 – DN 1800 (NPS 2 – 72)



**HG**Bi-directional | Through-going
DN 50 - DN 1200 (NPS 2 - 42)





Find out more about Stafsjö knife gate valves

#### HIGH PERFORMANCE VALVES

#### Reliable under extreme conditions

The double eccentric design, high-quality materials and precision machining ensure safety even under extreme operating conditions.

Crucial for any applications with temperatures and pressures exceeding the capability of resilient seated butterfly valves, such as high-temperature leach systems and high-pressure mine dewatering duties.



**HP111 / HP114**Wafer/Lug-type
DN 50 - DN 1200 (NPS 2 - 48)



HP112 Double-flanged DN 80 – DN 600 (NPS 3 – 24)

#### **PTFE VALVES**

#### **Durable and safe**

PTFE-lined butterfly and control valves are specially designed for use in chemically aggressive alkalis and acids. The minimum 3 mm thick lining made of pure PTFE guarantees optimum protection.

PTFE valves must be 100% reliable to ensure a safe and environmentally sound operation. T200 valves are used extensively in High Pressure Acid Leach (HPAL) processes, elution systems and cyanide handling.



**T211-A**Wafer-type
DN 50 – DN 300 (NPS 2 – 12)



**T214-A** Lug-type DN 50 – DN 300 (NPS 2 – 12)

#### **RESILIENT SEATED VALVES**

#### Versatile and reliable

Due to their design and material variety, our concentric, resilient seated butterfly valves offer huge versatility for isolation and control applications.

Resilient seated butterfly valves are the backbone of the butterfly valve range. They are widely used across the site for process water, plant air, reagents and dewatering applications.



**Z011-A**Wafer-type
DN 20 – DN 1000 (NPS 3/4 – 40)



**Z014-A** Lug-type DN 20 – DN 600 (NPS 3/4 – 24)



More information on butterfly valves.



**Z411-A / Z414-A**Wafer/Lug-type
Reduced diameter for PE/PP
DN 40 – DN 600 (NPS 1½, – 24)



**F012-A**Double-flanged
DN 50 – DN 1400 (NPS 2 – 56)

#### **ACTUATOR TECHNOLOGY**

#### **Energy-efficient with uncompromising performance**

EBRO actuators enable butterfly valves and knife gate valves to be actuated with high-efficiency. No compromises, but rather through seamless component integration, energy efficiency is enhanced. Individual configurations of product components are possible upon customer request to minimize total cost of ownership.

Our challenge is to precisely align valves and actuators with customer needs. Automation technology simplies complex systems, reduces errors, and accelerates processes.



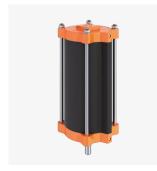
More information on actuator technology.



**EB-SYD (Scotch-Yoke)** Pneumatic actuator Double-acting 27 Nm – 9.768 Nm



**EB-SYS (Scotch-Yoke)** Pneumatic actuator Single-acting 35 Nm – 3.590 Nm



SC Linear actuator Double-acting 4.712 N – 48.255 N (6 bar)



**E50 - E210**Electric actuator
24V AC/DC, 230V AC, 400V AC
40 Nm - 4.000 Nm

#### **CONTROLS**

#### Efficiency and precision in process technology

Automated valves play a crucial role in process engineering. They control flow rates, isolate product streams, and reopen pipelines. It is essential for them to operate seamlessly with the actuation system while meeting specific customer requirements.

The use of automated valves minimizes errors in complex systems, enhancing the safety and reliability of operations. Additionally, they enable more efficient and precise workflows, leading to a reduction in total cost ownership.



More information on controls.



**SBU IO-Link** Smart Box Unit Valve status monitoring



**EP3** Electro-pneumatic positioner



**Module E50 – E210** for control applications



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