

**AVK FLOW CONTROL**

# OPTIMAL **VALVE SOLUTIONS** FOR POWER GENERATION PLANTS



Orbinox



InterApp



World Valve



Wouter Witzel



TEC artec



Glenfield



AVK





## WHERE EVER AND WHEN EVER

The AVK Group of Manufacturing Companies has valves for many specific areas in most types of Power Generating Plants and are able to offer the products worldwide through the network of AVK Sales Companies and Appointed Distributors for Industrial Valves.

## AVK FLOW CONTROL

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# HIGH PERFORMANCE & HIGH QUALITY VALVES



**FOR EVERY TYPE OF POWER GENERATING PLANT, AVK INDUSTRIAL VALVES CAN DELIVER BOTH HIGHLY SPECIALIZED ENGINEERED PRODUCTS AS WELL AS STANDARD PRODUCTS, THAT MEET THE STANDARDS, APPROVALS, PERFORMANCE AND QUALITY AS REQUIRED WITHIN POWER GENERATING PLANTS WORLD WIDE.**

The AVK Group of Industrial Valve Manufacturing Companies have many years of experience in design, development and production of valves for the power generating industry. The products are tested and approved before delivery, and full documentation, material certificates and installation and maintenance

instructions are available for each product supplied. Many of the products are designed and produced for maintenance free use, and for those products where regular maintenance is required, designed for easy maintenance and service.



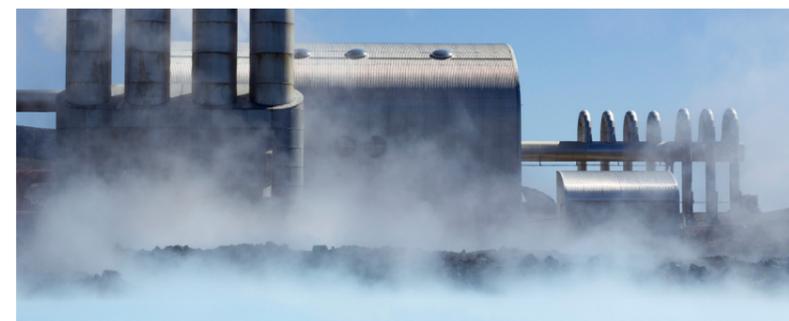
**FOSSIL ENERGY**



**NUCLEAR ENERGY**



**HYDRO ENERGY**



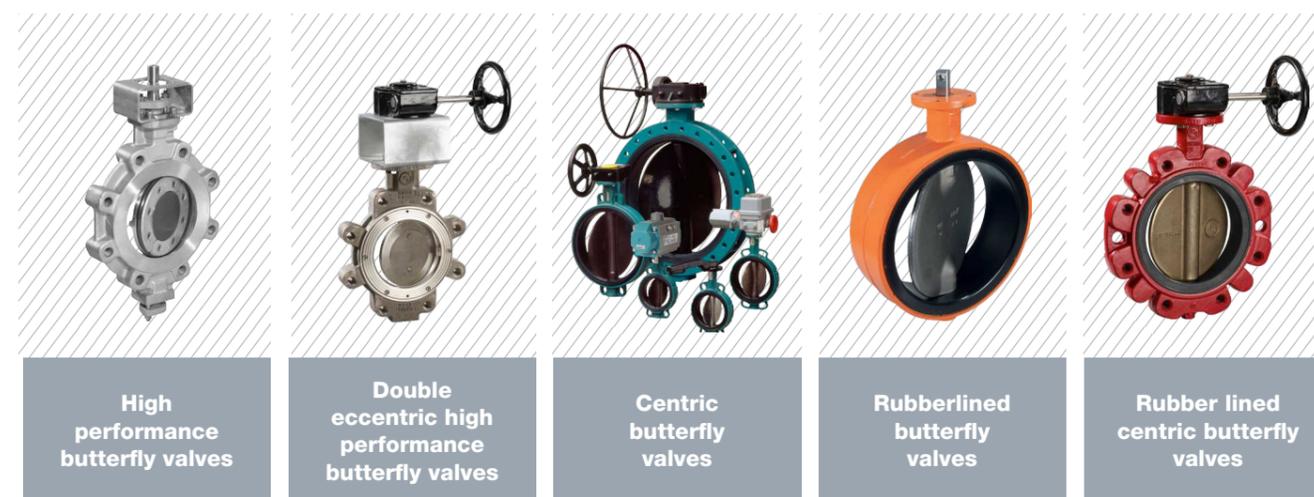
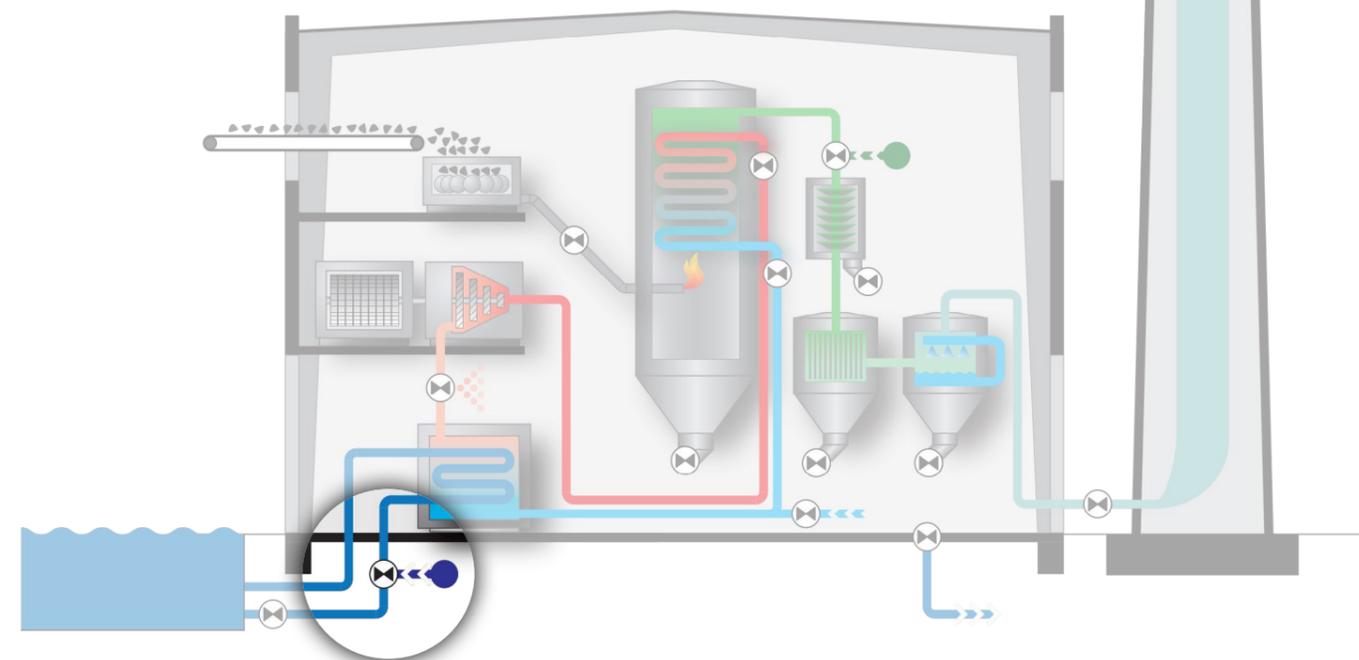
**GEO THERMAL ENERGY**



**BIOMASS ENERGY**

# WATER INTAKE SYSTEMS

High performance butterfly valves							
Centric butterfly valves with loose or fixed liner							
Double eccentric butterfly valves							
Full bore ball valves High pressure ball valves							
Knife gate valves							
Penstocks wall mounted or channel mounted							
Gate valves							
Check valves							



**High performance butterfly valves**  
Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50-900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C

**Double eccentric high performance butterfly valves**  
Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C

**Centric butterfly valves**  
Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators

**Wafer/lug type:**

Size:  
DN25-1600  
DN25-600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C

**Rubberlined butterfly valves**  
Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50-2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C

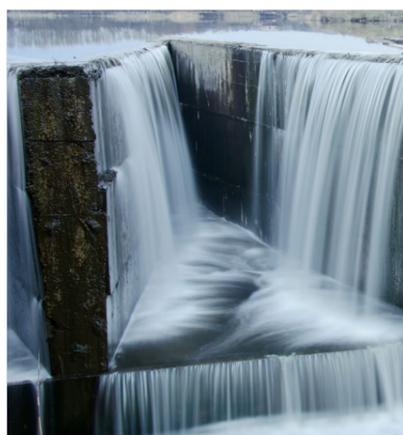
**Rubber lined centric butterfly valves**  
Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum  
to 20 Bar

Temperature:  
-30 to +200°C



# WATER INTAKE SYSTEMS



**Bidirectional knife gate valve**

Cast iron or stainless steel body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN250) / 6 Bar (DN450)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20°C to +200°C



**Wall mounted penstock**

Four-side sealing. Stainless steel frame and gate, EPDM seals, HMWPE guides and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to 3000 x 3000 mm

Pressure:  
1 Bar On / 0,6 Bar Off

Temperature:  
0 to +70°C



**Channel penstock**

Three-side sealing. Stainless steel full frame and gate, EPDM seals, HMWPE guides and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to 3000 x 3000 mm

Pressure:  
Gate height

Temperature:  
0 to +70°C



**Weir penstock**

Three- or four-side sealing downward opening. Stainless steel frame and gate, EPDM seals and HMWPE guides, bidirectional and with various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to 3000 x 3000 mm

Pressure:  
Gate height

Temperature:  
0 to +70°C



**Flanged double eccentric butterfly valves**

Body and disc in ductile iron. Shaft, and pins in Stainless Steel. Fusion bonded epoxy coating acc to GSK.

**Specifics:**

Size:  
DN200-2200

Pressure:  
10 + 16 + 25 Bar

Temperature:  
0 to +70°C



**Full bore ball valves**

Body and ball in stainless steel. Seats in PTFE. Manually pneumatically or electrically operated.

**Specifics:**

Size:  
DN15-100

Pressure:  
Up to 63 Bar

Temperature:  
Up to +650°C



**High pressure ball valves**

Soft and metal seated On/off and control function Custom made.

**Specifics:**

Size:  
DN25-1000

Pressure:  
From 16 Bar to 420 Bar

Temperature:  
Up to +550°C



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.) .

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN250) / 6 Bar (DN450)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20°C to +250°C



**Metal seated gate valves**

Metal seated gate valve for isolation. Double Flanged.

**Specifics:**

Size:  
DN50-1800

Pressure:  
10 + 16 Bar  
(25 Bar available in certain sizes)

Temperature:  
0 to +70°C



**Large diameter resilient seated gate valve**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron. Operated by gearbox and hand wheel or actuator.

**Specifics:**

Size:  
DN700-800

Pressure:  
Up to 16 Bar

Temperature:  
0 to +70°C



**Swing check Valves**

Body and bonnet in ductile iron. Stem and hinge in stainless steel. Lever and weight or lever and spring.

**Specifics:**

Size:  
DN50-600

Pressure:  
Up to 16 Bar

Temperature:  
0 to +70°C



**Recoil Check Valves**

Metal seated high performance, fast acting, non slam check valve.

**Specifics:**

Size:  
DN50-1400

Pressure:  
10 + 16 + 25 Bar

Temperature:  
0 to +70°C

# WATER TREATMENT

High performance butterfly valves							
Centric butterfly valves with loose or fixed liner							
Double eccentric butterfly valves							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50–900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and Double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators

**Wafer/lug type:**

Size:  
DN25–1600  
DN25–600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50–2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C



**Rubber lined centric butterfly valves**

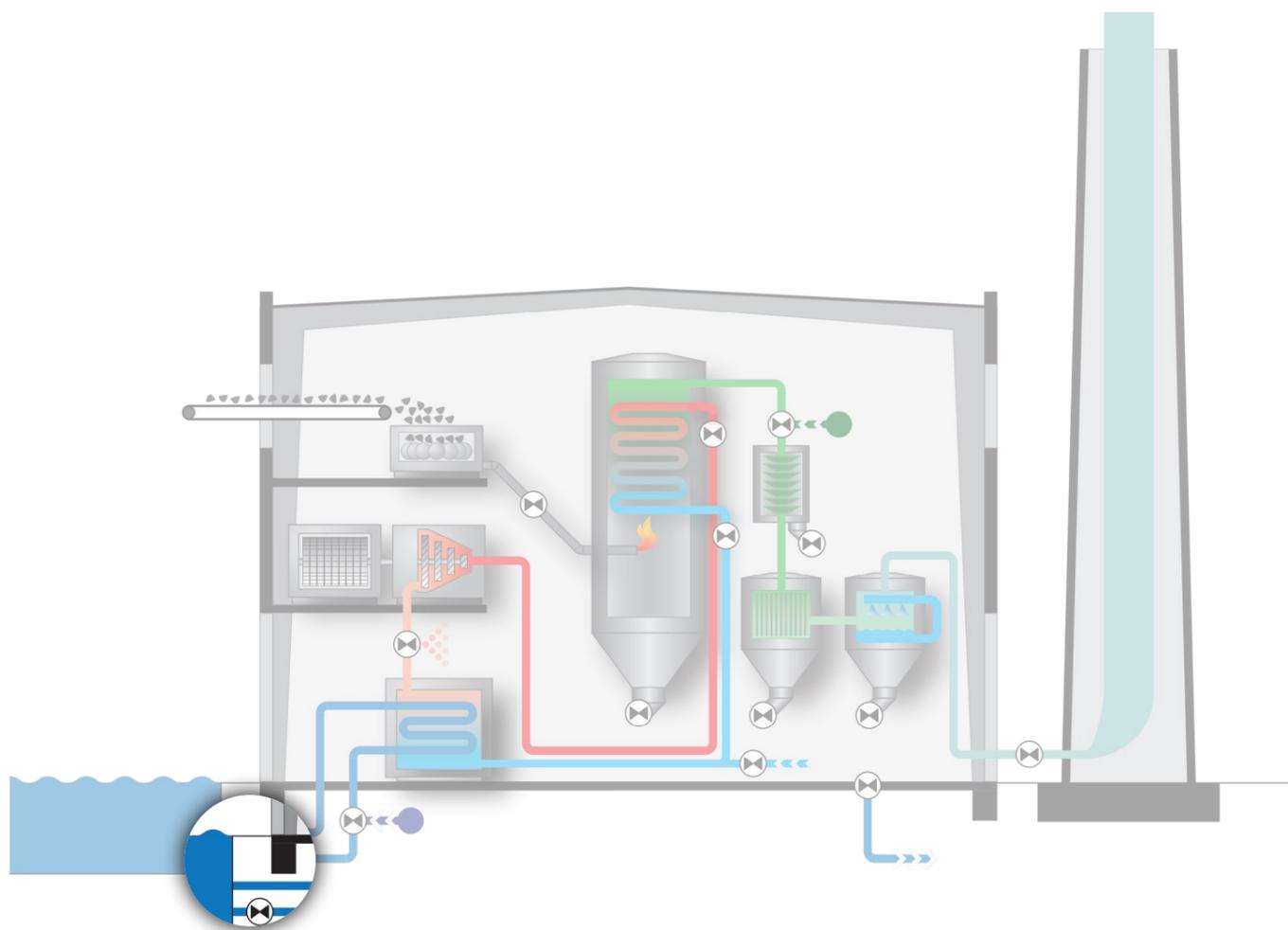
Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum  
to 20 Bar

Temperature:  
-30 to +200°C



**Flanged double eccentric butterfly valves**

Body and disc in ductile iron. Shaft, and pins in Stainless Steel. Fusion bonded epoxy coating acc to GSK.

**Specifics:**

Size:  
DN200–2200

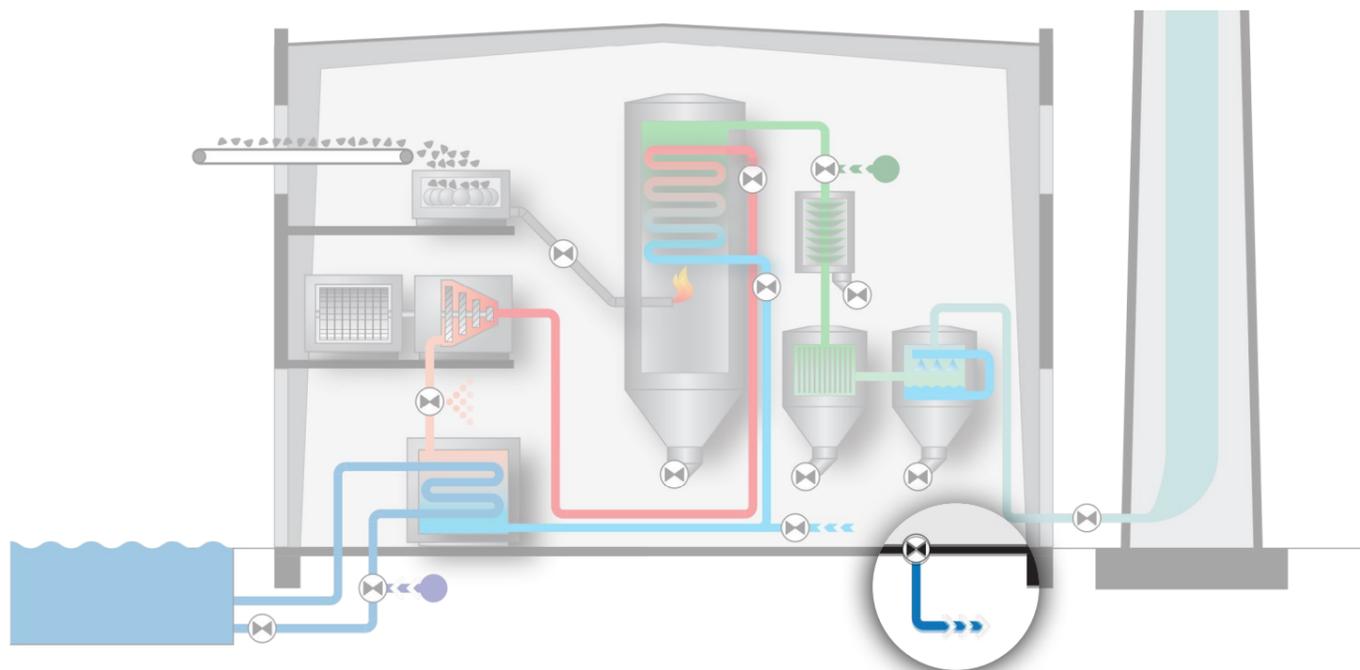
Pressure:  
10 + 16 + 25 Bar

Temperature:  
0 to +70°C



# FLOOR DRAINS

High performance butterfly valves							
Double eccentric butterfly valves							
Centric butterfly valves with loose or fixed liner							
Full bore ball valves High pressure ball valves							
Knife gate valves: - Unidirectional - Bidirectional with actuator (electric or pneumatic) - Unidirectional, metal seated							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**  
Size: DN50-900  
Pressure: 20 Bar (class 150)  
50 Bar (class 300)  
Temperature: Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and Double flanged design.

**Specifics:**  
Size: Up to DN1200  
Pressure: Full vacuum to 25 Bar  
Temperature: -50 to +230°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**  
Size: DN50-2200  
Pressure: Up to 25 Bar  
Temperature: Up to 200°C



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators

**Wafer/lug type:**  
Size: DN25-1600  
DN25-600  
Pressure: Up to 16 Bar  
Up to 20 Bar  
Temperature: -50 to +140°C  
-40 to +200°C



**Flanged double eccentric butterfly valves**

Body and disc in ductile iron. Shaft, and pins in Stainless Steel. Fusion bonded epoxy coating acc to GSK.

**Specifics:**  
Size: DN200-2200  
Pressure: 10 + 16 + 25 Bar  
Temperature: 0 to +70°C



**Full bore ball valves**

Body and ball in stainless steel. Seats in PTFE. Manually pneumatically or electrically operated.

**Specifics:**  
Size: DN15-100  
Pressure: Up to 63 Bar  
Temperature: Up to +650°C



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**  
Size: Up to DN1200  
Pressure: 10 Bar (DN250)  
6 Bar (DN450)  
5 Bar (DN600)  
2 Bar (DN1200)  
Temperature: -20 to +250°C



**Bidirectional knife gate valve**

Cast iron or stainless steel body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**  
Size: Up to DN1200  
Pressure: 10 Bar (DN250)  
6 Bar (DN450)  
5 Bar (DN600)  
2 Bar (DN1200)  
Temperature: -20°C to +200°C



**Knife gate valve acc to MSS SP-81**

Stainless steel monoblock body and gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**  
Size: Up to DN36"  
Pressure: 10 Bar (DN24")  
7 Bar (DN36")  
Temperature: -20°C to +250°C



**Bidirectional knife gate valve acc to MSS SP-81**

Stainless steel body and gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**  
Size: Up to DN36"  
Pressure: 10 Bar (DN24")  
7 Bar (DN36")  
Temperature: -20° C to +200°C

# BOILER FEED WATER & CONDENSATE WATER SYSTEM

High performance butterfly valves							
Full bore ball valves High pressure ball valves							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50-900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C



**High pressure ball valves**

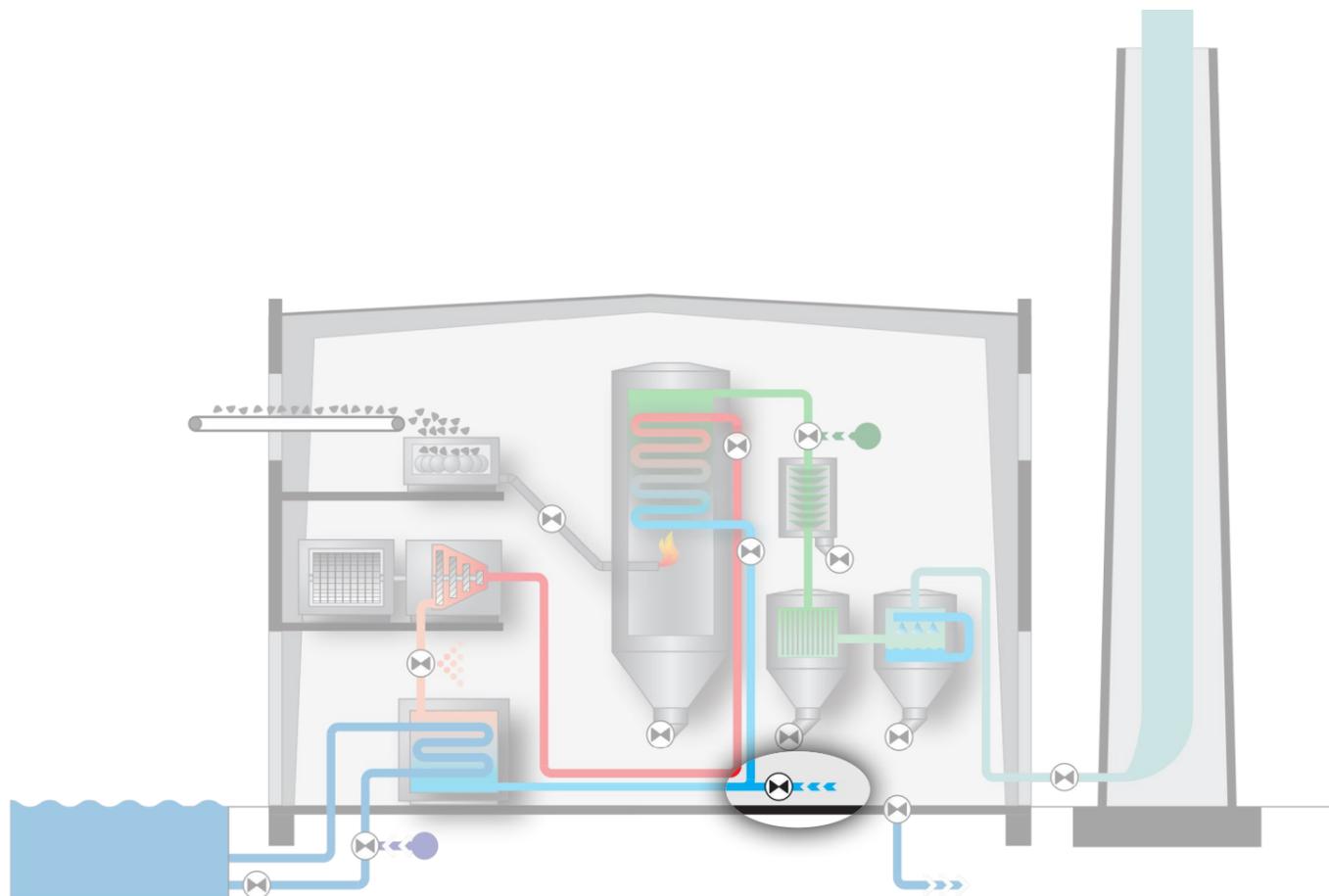
Soft and metal seated  
On/off and control function  
Custom made.

**Specifics:**

Size:  
DN25-1000

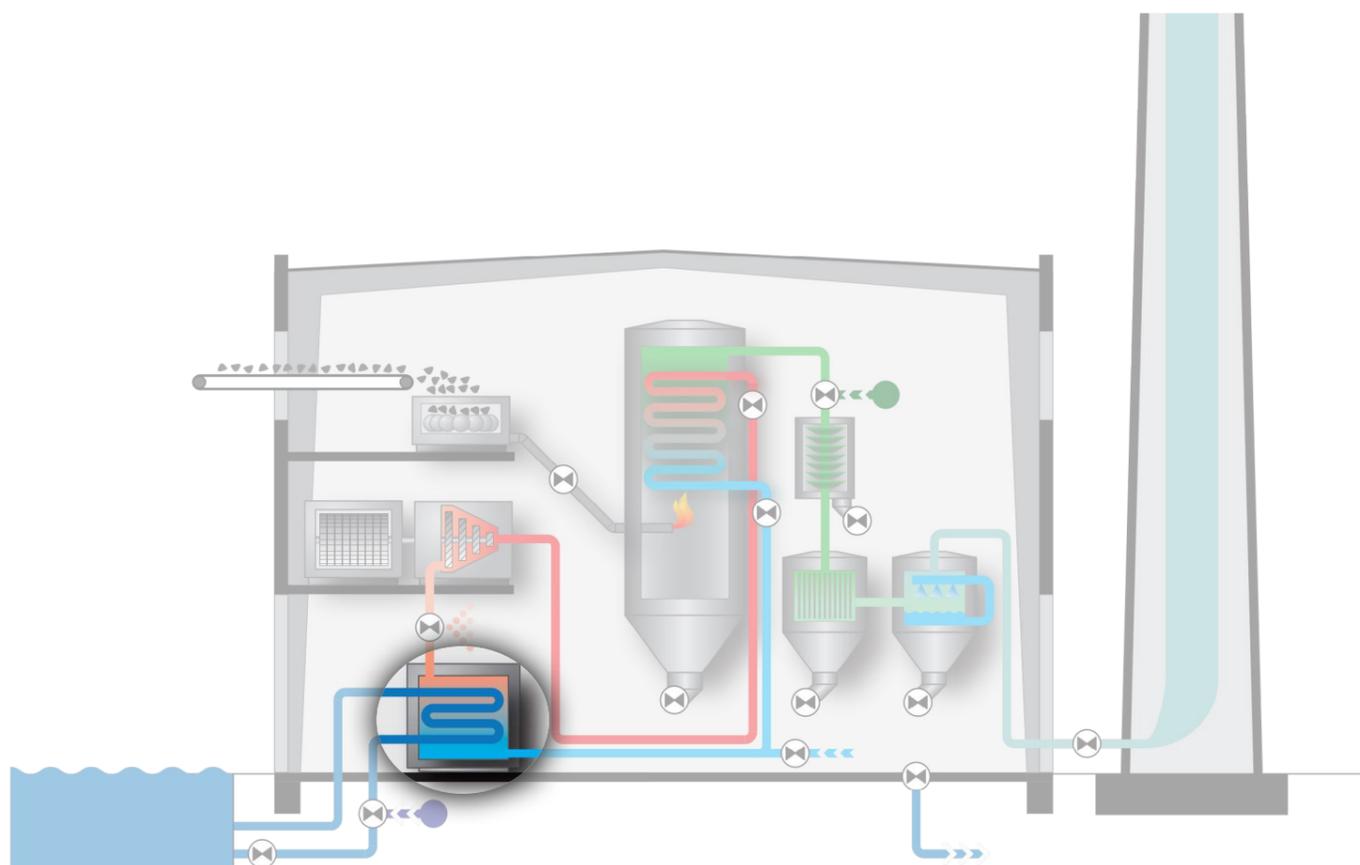
Pressure:  
From 16 Bar to 420 Bar

Temperature:  
Up to +550°C



# COOLING WATER SYSTEMS

	AVR	interApp	WOUTER WITZEL	Wy World-Valve	ORBINOX	Glenfield	tec artec
High Performance butterfly valves							
Double eccentric butterfly valves							
Centric butterfly valves with loose or fixed liner							
Full bore ball valves High pressure ball valves							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50-900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and Double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C



**Flanged double eccentric butterfly valves**

Body and disc in ductile iron. Shaft, and pins in Stainless Steel. Fusion bonded epoxy coating acc to GSK.

**Specifics:**

Size:  
DN200-2200

Pressure:  
10 + 16 + 25 bar

Temperature:  
0 to +70°C



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators

**Wafer/lug type:**

Size:  
DN25-1600  
DN25-600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50-2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum to 20 Bar

Temperature:  
-30 to +200°C



**Full bore ball valves**

Body and ball in stainless steel. Seats in PTFE. Manually pneumatically or electrically operated.

**Specifics:**

Size:  
DN15-100

Pressure:  
Up to 63 Bar

Temperature:  
Up to +650°C



**High pressure ball valves**

Soft and metal seated On/off and control function Custom made.

**Specifics:**

Size:  
DN25-1000

Pressure:  
From 16 Bar to 420 Bar

Temperature:  
Up to +550°C

# STEAM TEMPERATURE CONTROL

							
Desuperheater							
Steam conversion station							
Motive steam nozzle							



Desuperheater valve

Steam temperature control by injecting boiler feed water  
Control range 1:50 standard  
Control range 1:2500 HT version.

**Specifics:**

Size:  
DN200-1000

Pressure:  
25 - 400 Bar

Temperature:  
Up to +750°C



Steam conversion valve

Steam pressure and temperature control.  
Safety function acc. to TRD421.

**Specifics:**

Size:  
DN50-2000

Pressure:  
25 - 400 Bar

Temperature:  
Up to +580°C



Motive steam nozzle

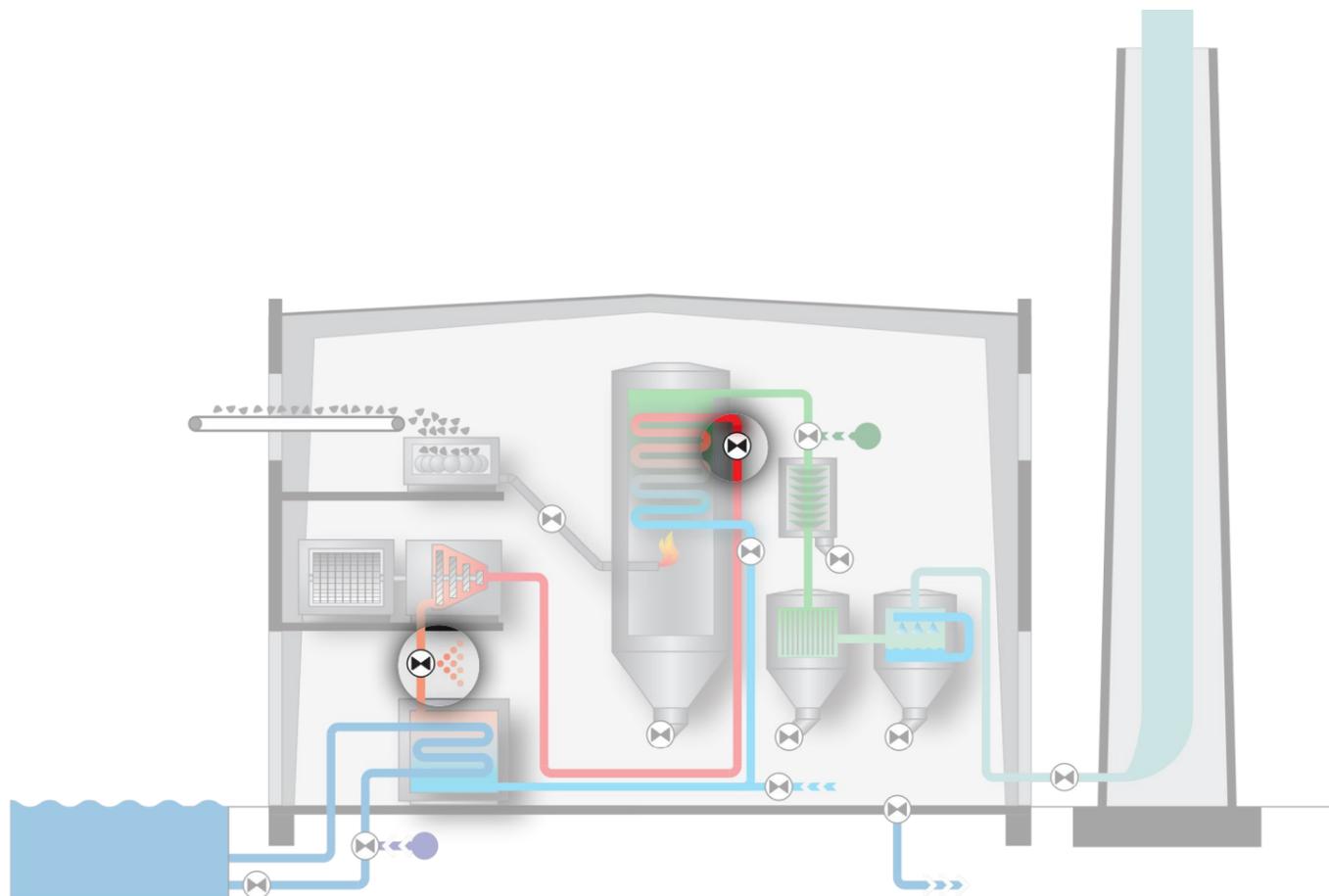
Steam temperature control near saturation curve.  
Custom made.

**Specifics:**

Size:  
DN200-2000

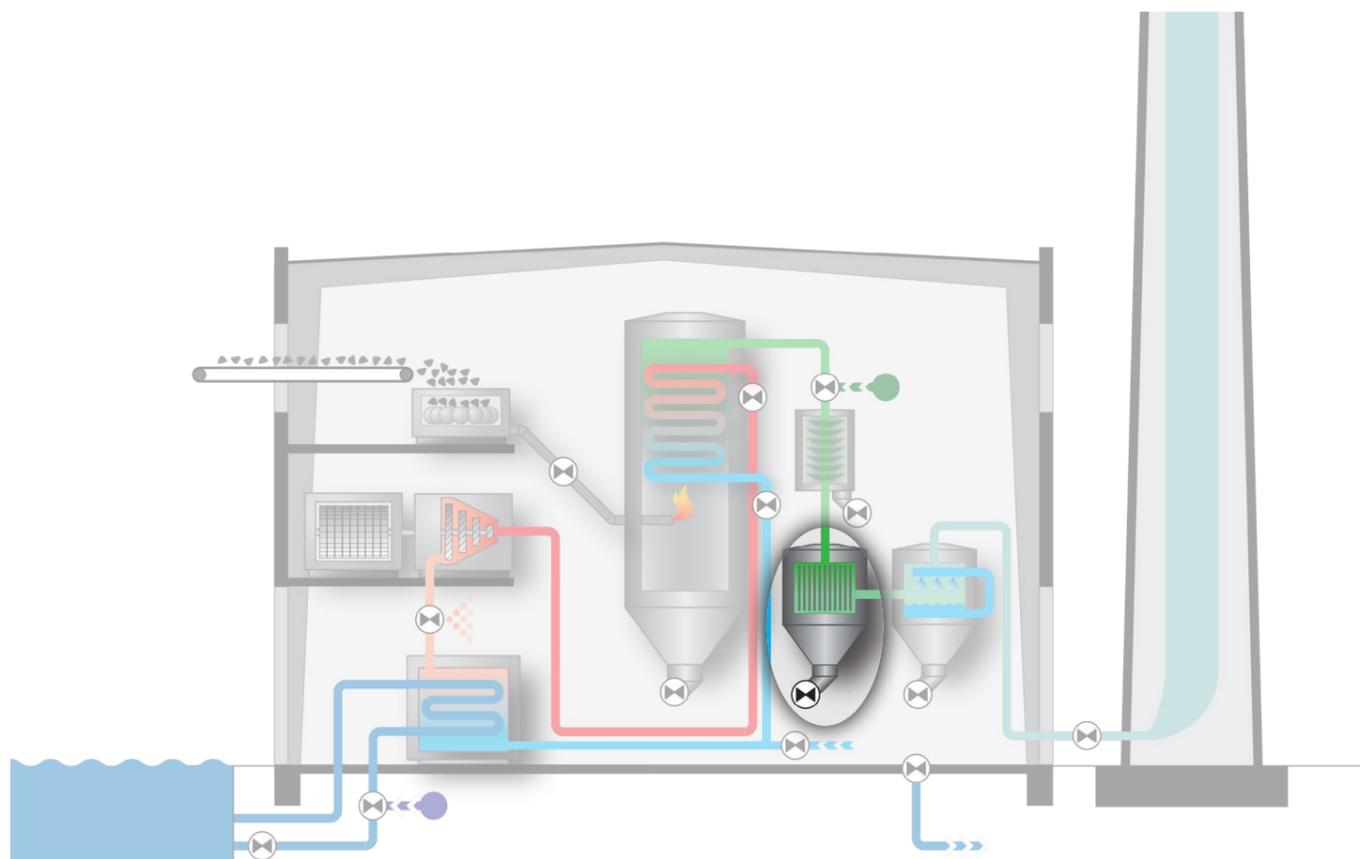
Pressure:  
Up to 400 Bar

Temperature:  
Up to +750°C



# CHEMICAL SERVICES

High performance butterfly valves							
Centric butterfly valves with loose or fixed liner							
Full bore ball valves High pressure ball valves							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50–900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and Double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators.

**Wafer/lug type:**

Size:  
DN25–1600  
DN25–600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



**Centric butterfly valves**

Body in ductile iron  
Shaft and disc in stainless steel, PFA lined. Liner in PTFE. Manually pneumatically or electrically operated.

**Specifics:**

Size:  
DN32–900

Pressure:  
2.5 – 16 bar

Temperature:  
-20°C to +200°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50–2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum to 20 Bar

Temperature:  
-30 to +200°C



**High pressure ball valves**

Soft and metal seated  
On/off and control function  
Custom made.

**Specifics:**

Size:  
DN25–1000

Pressure:  
From 16 Bar to 420 Bar

Temperature:  
Up to +550°C



**Ceramic ball valves**

Ceramic inner parts  
On/off and control function  
Custom made.

**Specifics:**

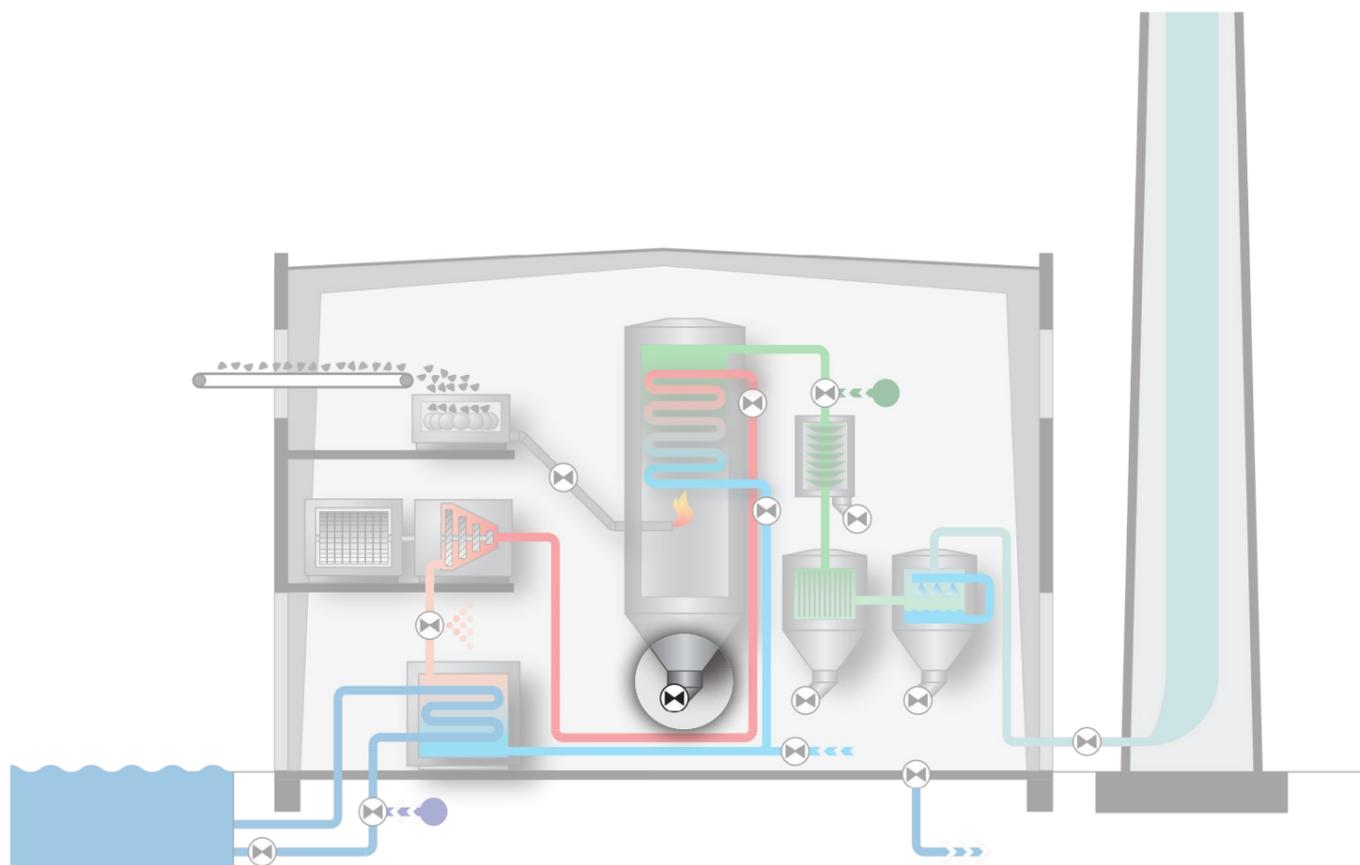
Size:  
DN25–250

Pressure:  
Up to 16 Bar

Temperature:  
Up to +200°C

# ASH & CLINKER REMOVAL SYSTEMS

Knife gate valves: - Unidirectional - Bidirectional with actuator (electric or pneumatic) - Unidirectional, metal seated							
Full bore ball valves High pressure ball valves							
Centric butterfly valve with fixed liner							



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN250) / 6 Bar (DN450)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20 to +250°C



**Knife gate valve acc to MSS SP-81**

Stainless steel monoblock body and gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN36"

Pressure:  
10 Bar (DN24") / 7 Bar (DN36")

Temperature:  
-20°C to +250°C



**Hopper shape knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN600

Pressure:  
3 Bar (DN250) / 2 Bar (DN400)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20° C to +550°C



**Square port fabricated knife gate valve**

Carbon steel or stainless steel body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to 1200 x 1200 mm

Pressure:  
1 Bar

Temperature:  
-20° C to +550°C



**Full bore ball valves**

Body and ball in stainless steel. Seats in PTFE. Manually pneumatically or electrically operated.

**Specifics:**

Size:  
DN15-100

Pressure:  
Up to 63 Bar

Temperature:  
Up to +650°C



**High pressure ball valves**

Soft and metal seated On/off and control function Custom made.

**Specifics:**

Size:  
DN25-1000

Pressure:  
From 16 to 400 Bar

Temperature:  
Up to +550°C



**Metal seated ball valves**

Tungsten carbide coating, On/off and control function Custom made.

**Specifics:**

Size:  
DN25-600

Pressure:  
From 16 to 420 Bar

Temperature:  
Up to +550°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

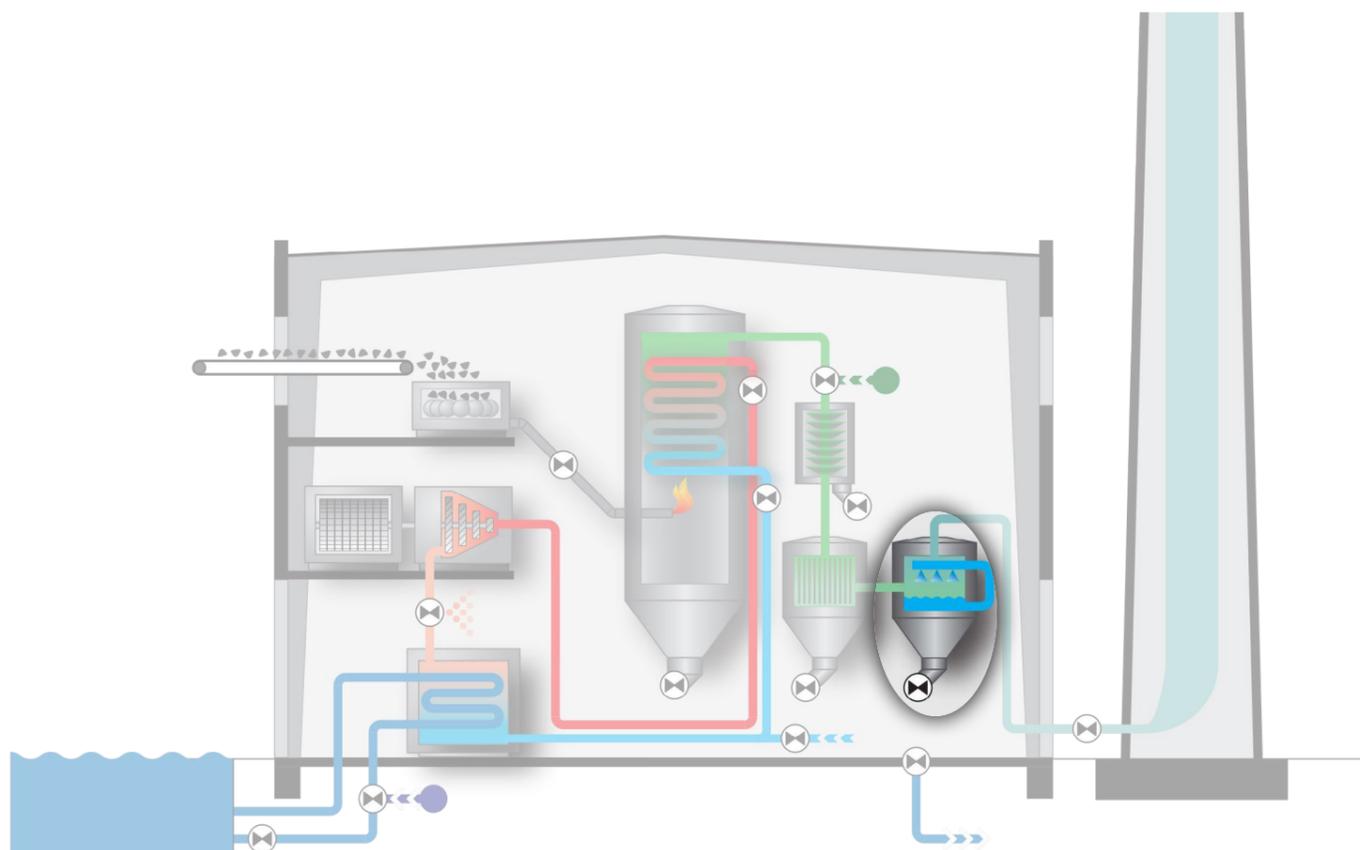
Size:  
DN50-2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C

# SCRUBBER SLURRY HANDLING

Full bore ball valves High pressure ball valves							
Centric butterfly valves with loose or fixed liner							
Knife gate valves: - Unidirectional - Bidirectional with actuator (electric or pneumatic) - Unidirectional, metal seated							



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators.

<b>Wafer/lug type:</b>
Size: DN25–1600 DN25–600
Pressure: Up to 16 Bar Up to 20 Bar
Temperature: -50 to +140°C -40 to +200°C



**Full bore ball valves**

Body and ball in stainless steel. Seats in PTFE. Manually pneumatically or electrically operated.

<b>Specifics:</b>
Size: DN15–100
Pressure: Up to 63 Bar
Temperature: Up to +650°C



**High pressure ball valves**

Soft and metal seated On/off and control function Custom made.

<b>Specifics:</b>
Size: DN25–1000
Pressure: From 16 to 400 Bar
Temperature: Up to +550°C



**Ceramic and metal seated ball valves**

Ceramic parts Tungsten carbide coating, On/off and control function.

<b>Specifics:</b>
Size: DN25–250/1000
Pressure: From 16 to 420
Temperature: Up to +200°C/+550°C



**Rubber lined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

<b>Specifics:</b>
Size: DN50–2200
Pressure: Up to 25 Bar
Temperature: Up to +200°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

<b>Specifics:</b>
Size: Up to DN2000
Pressure: Full vacuum to 20 Bar
Temperature: -30 to +200°C



**Slurry knife gate valve**

Ductile iron or stainless steel body, stainless steel gate, two rubber sleeves and various actuation solutions (manual, pneumatic, electric, etc.).

<b>Specifics:</b>
Size: Up to DN1200
Pressure: 10 Bar (DN600) 5 Bar (DN1200)
Temperature: -20° C to +200°C



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

<b>Specifics:</b>
Size: Up to DN1200
Pressure: 10 Bar (DN250) 6 Bar (DN450) 5 Bar (DN600) 2 Bar (DN1200)
Temperature: -20 to +250°C



**Bidirectional knife gate valve**

Cast iron or stainless steel body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

<b>Specifics:</b>
Size: Up to DN1200
Pressure: 10 Bar (DN250) 6 Bar (DN450) 5 Bar (DN600) 2 Bar (DN1200)
Temperature: -20°C to +200°C



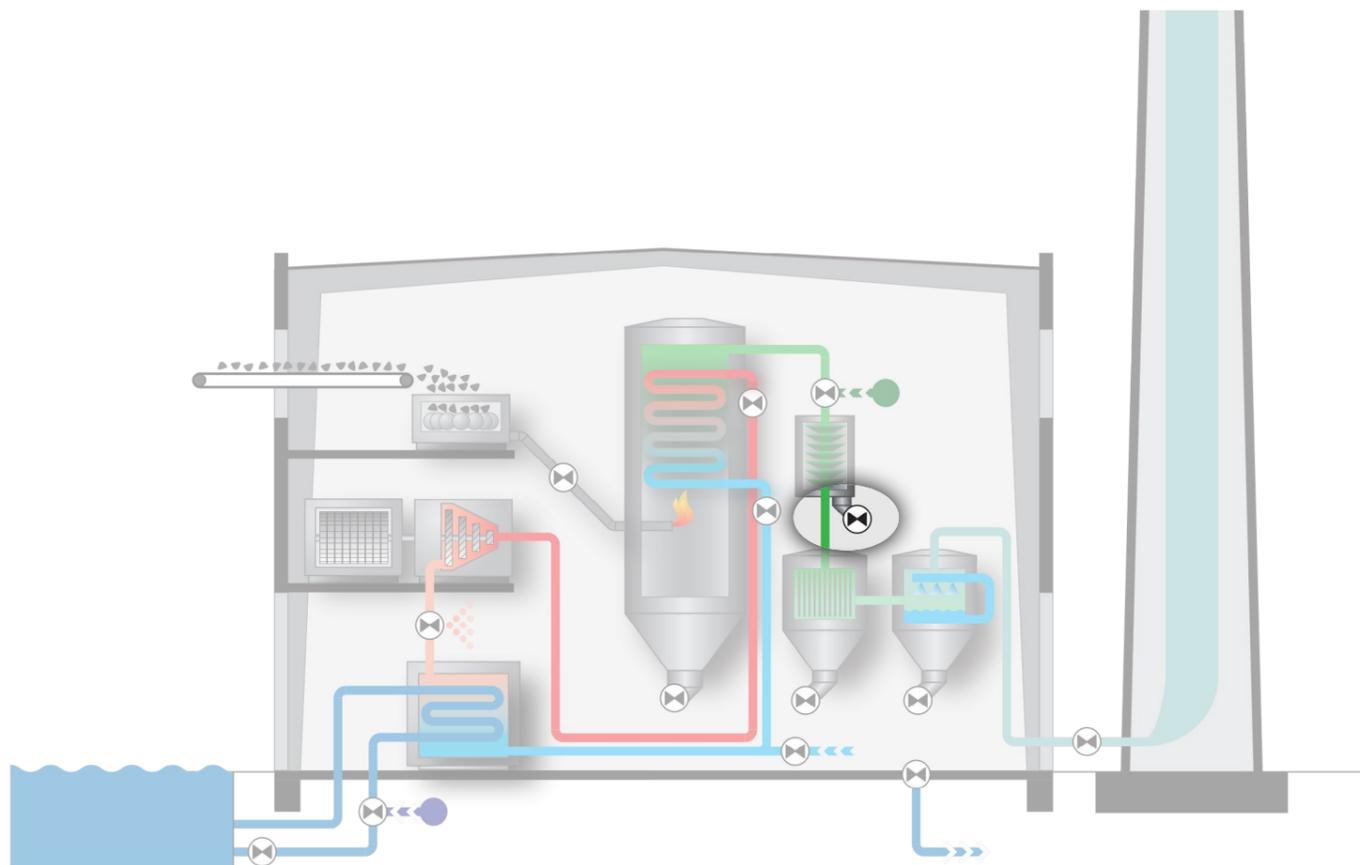
**Bidirectional knife gate valve acc to MSS SP-81**

Stainless steel body and gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

<b>Specifics:</b>
Size: Up to DN36"
Pressure: 10 Bar (DN24") 7 Bar (DN36")
Temperature: -20° C to +200°C

# FILTERING SYSTEMS

							
High performance butterfly valves							
Dampers							
Centric butterfly valves with loose or fixed liner							



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size:  
DN50-900

Pressure:  
20 Bar (class 150)  
50 Bar (class 300)

Temperature:  
Up to +425°C



**Double eccentric high performance butterfly valves**

Body and trim materials to customer requirements. Teflon or NBR seated. Wafer, lug, mono flanged and Double flanged design.

**Specifics:**

Size:  
Up to DN1200

Pressure:  
Full vacuum  
to 25 Bar

Temperature:  
-50 to +230°C



**Butterfly damper**

Carbon or stainless steel fabricated body and blade, rigid ledge or flexible seal and various actuation solutions (manual, pneumatic, electric).

**Specifics:**

Size:  
Up to DN3000

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Louver damper**

Carbon or stainless steel fabricated, parallel or opposed blades, rigid ledge or flexible seal and various actuation solutions (manual, pneumatic, electric).

**Specifics:**

Size:  
Up to 10000 x 10000 mm

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum to 20 Bar

Temperature:  
-30 to +200°C



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators.

**Wafer/lug type:**

Size:  
DN25-1600  
DN25-600

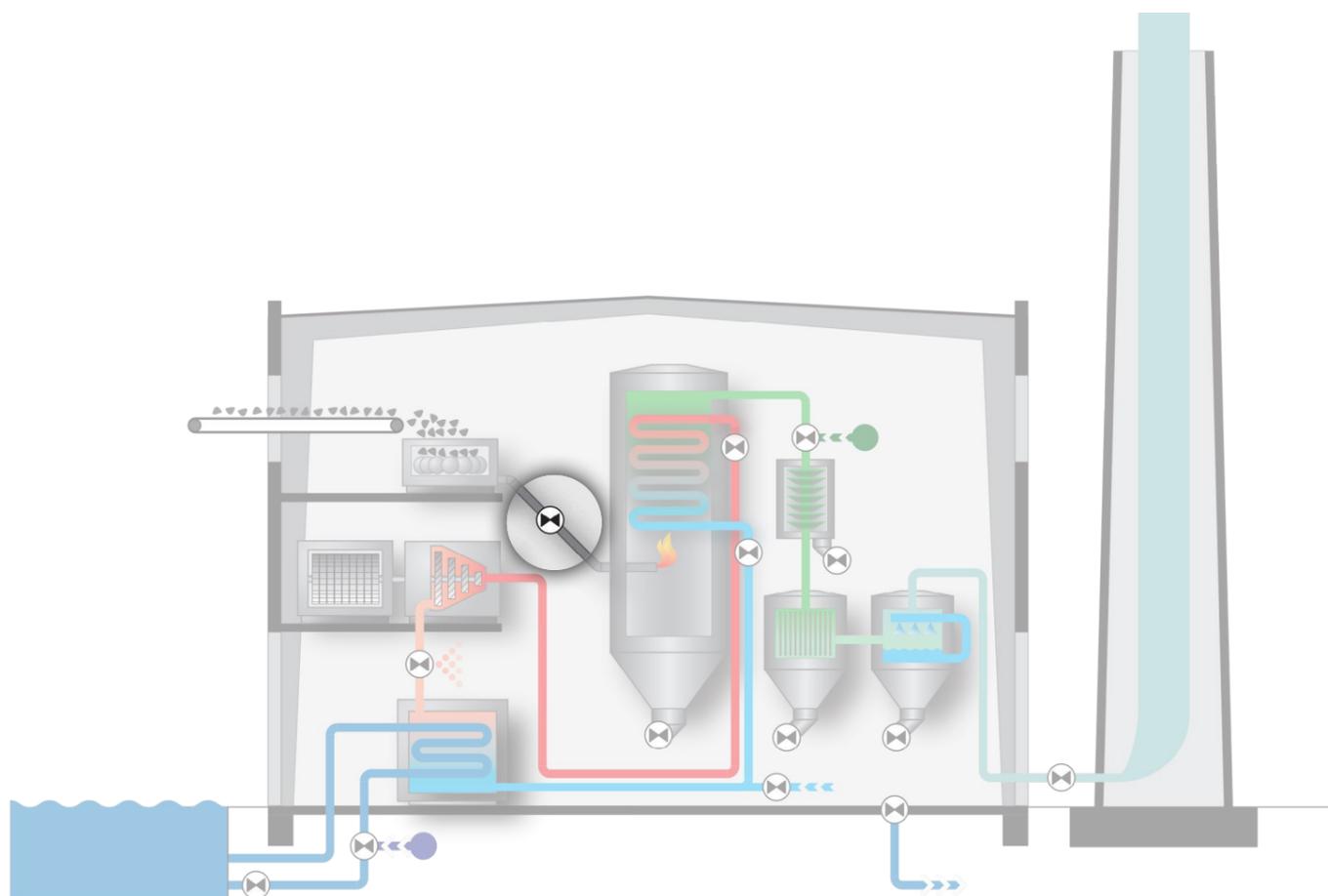
Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



# COAL BURNER ISOLATION

Knife gate valves: - Unidirectional - Bidirectional with actuator (electric or pneumatic) - Unidirectional, metal seated							



**Coal burner line knife gate valve (ATEX Cat. I & DIN 14460)**

Ductile iron split body, stainless steel gate, viton seat and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1000

Pressure:  
2 Bar (10 Bar explosion)

Temperature:  
-20° C to +200°C



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN250) / 6 Bar (DN450)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20 to +250°C



**Coal burner line knife gate valve (NFPA 85)**

Full flanged -MSS SP 81 face to face- KGV. Ductile iron body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN24")  
7 Bar (DN36")

Temperature:  
-20° C to +550°C



**Through conduit knife gate valve**

Cast iron or stainless steel split body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1000

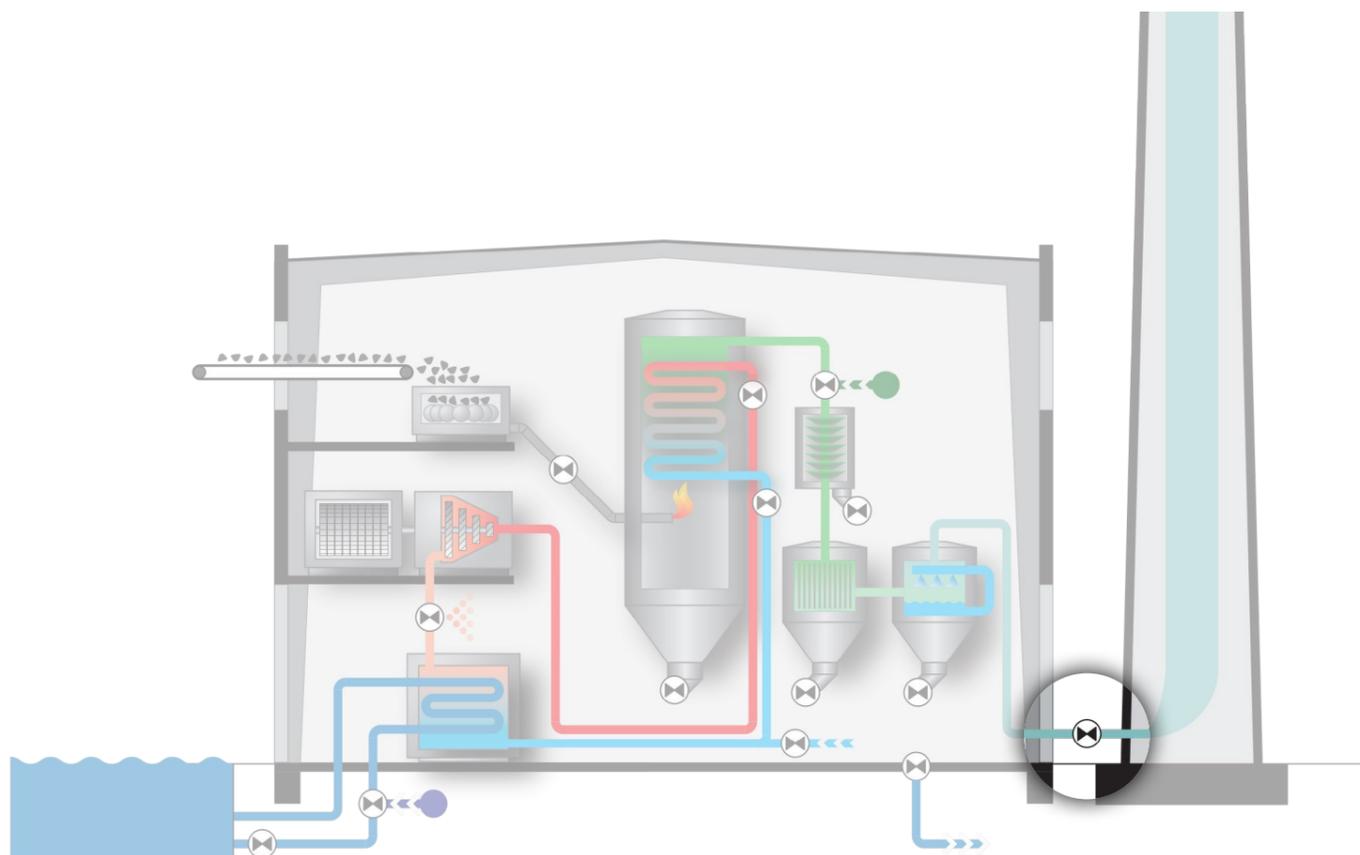
Pressure:  
10 Bar (DN125) / 8 Bar (DN250)  
6 Bar (DN400) / 5 Bar (DN450)  
4 Bar (DN600) / 2 Bar (DN1000)

Temperature:  
-20° C to +550°C



# FLY ASH HANDLING SYSTEMS

	AVR	InterApp	WOUTER WITZEL	World-Valve	ORBINOX	Glenfield	tec artec
Knife gate valves: - Unidirectional - Bidirectional with actuator (electric or pneumatic) - Unidirectional, metal seated							
Swing Disc							
Centric butterfly valves with loose or fixed liner							



**General service knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN1200

Pressure:  
10 Bar (DN250) / 6 Bar (DN450)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20 to +250°C



**Hopper shape knife gate valve**

Cast iron or stainless steel monoblock body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to DN600

Pressure:  
3 Bar (DN250) / 2 Bar (DN400)  
5 Bar (DN600) / 2 Bar (DN1200)

Temperature:  
-20° C to +550°C



**Square port fabricated knife gate valve**

Carbon steel or stainless steel body, stainless steel gate, different seat materials (metal, EPDM,...) and various actuation solutions (manual, pneumatic, electric, etc.).

**Specifics:**

Size:  
Up to 1200 x 1200 mm

Pressure:  
1 Bar

Temperature:  
-20° C to +550°C



**Centric butterfly valves**

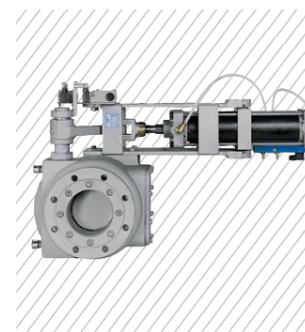
Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators.

**Wafer/lug type:**

Size:  
DN25–1600  
DN25–600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



**Swing disc valve**

Cast iron body, metal-to-metal stellite reinforced seat and disc and pneumatic actuator.

**Specifics:**

Size:  
Up to DN300

Pressure:  
Max. 3 Bar

Temperature:  
Up to +200°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged with Super duplex/hastelloy and EPDM.

**Specifics:**

Size:  
Up to DN2000

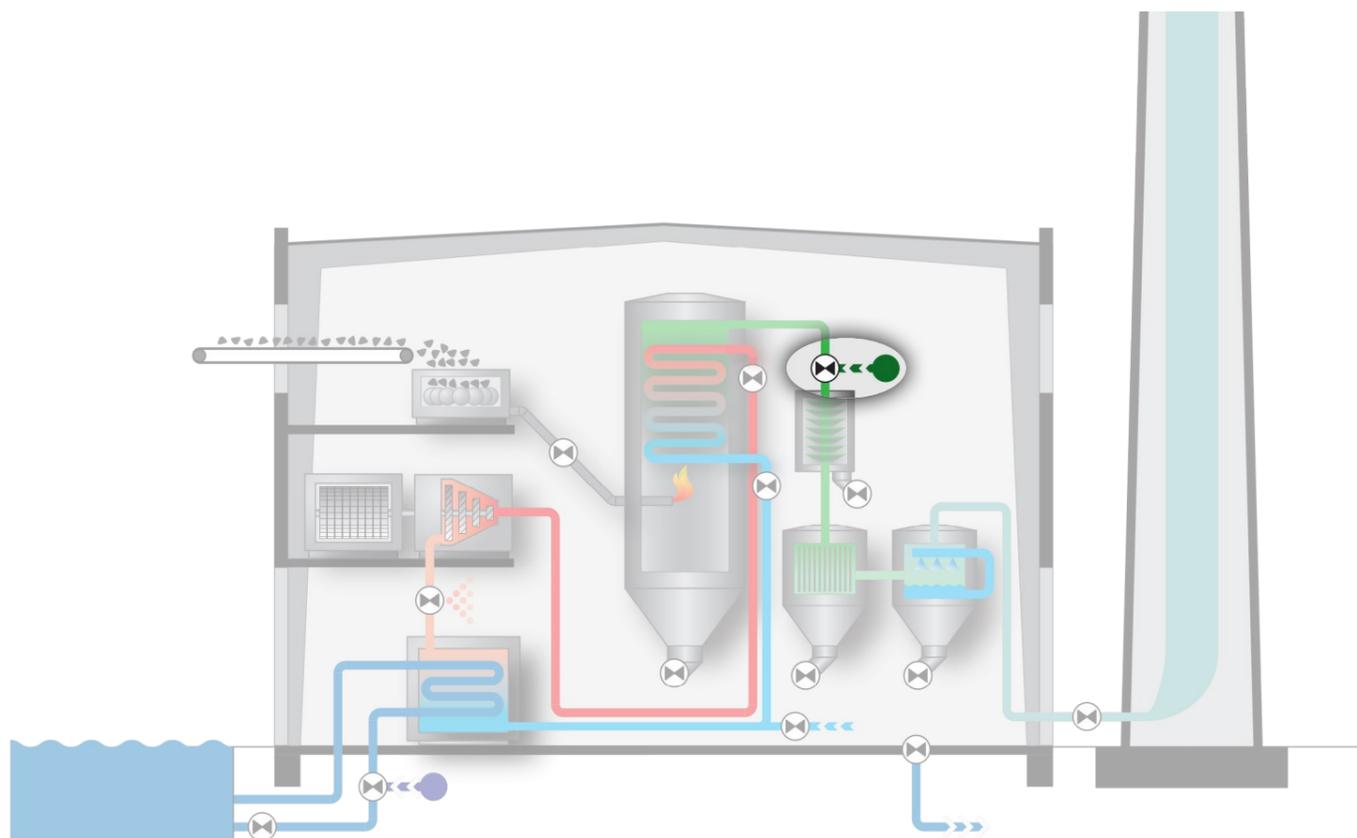
Pressure:  
Full vacuum to 20 Bar

Temperature:  
-30 to +200°C



# BOILER & SCRUBBER GASES HANDLING

	AVR	InterApp	WOUTER WITZEL	World-Valve	ORBINOX	Glenfield	tec artec
Flue Gas desulphuration systems							
Dampers							
Centric butterfly valves with loose or fixed liner							



**Centric butterfly valves**

Wide range of materials for disc and loose liner, with ductil iron or carbon steel body in wafer, lug or u-section type, all kind of actuators.

**Wafer/lug type:**

Size:  
DN25–1600  
DN25– 600

Pressure:  
Up to 16 Bar  
Up to 20 Bar

Temperature:  
-50 to +140°C  
-40 to +200°C



**High pressure ball valves**

Soft and metal seated. On/off and control function. Custom made.  
Alternative: Ceramic parts Tungsten carbide coating, On/off and control function.

**Specifics:**

Size:  
DN25–1000  
DN25– 250/1000

Pressure:  
From 16 to 400 Bar  
From 16 to 420 Bar

Temperature:  
Up to +550°C  
Up to +200°C/+550°C



**Louver damper**

Carbon or stainless steel fabricated, parallel or opposed blades, rigid ledge or flexible seal and various actuation solutions (manual, pneumatic, electric).

**Specifics:**

Size:  
Up to 10000 x 10000 mm

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**T-duct damper**

Carbon or stainless steel fabricated body and blades, rigid ledge or flexible seal and various actuation solutions (manual, pneumatic, electric) .

**Specifics:**

Size:  
Up to DN3000

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Butterfly damper**

Carbon or stainless steel fabricated body and blade, rigid ledge seal or flexible seal and various actuation solutions (manual, pneumatic, electric).

**Specifics:**

Size:  
Up to DN3000

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Guillotine damper**

Carbon or stainless steel fabricated body and gate, rigid ledge seal and various actuation solutions (manual, pneumatic, electric).

**Specifics:**

Size:  
Up to DN3000

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Stack damper**

Carbon or stainless steel fabricated body and blades, rigid ledge or flexible seal and various actuation solutions (pneumatic, electric).

**Specifics:**

Size:  
Up to DN7000

Pressure:  
Max. 0,5 Bar

Temperature:  
Up to +750°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50–2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C



**Rubber lined centric butterfly valves**

Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size:  
Up to DN2000

Pressure:  
Full vacuum to 20 Bar

Temperature:  
-30 to +200°C

# HYDROPOWER PLANT

						
Gate valves						
Discharge valves						
Double eccentric butterfly valves						
Gates						
Knife gate valves						
Check valves						



**Resilient seated gate valves**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron. Operated by gearbox and hand wheel or actuator.

**Specifics:**

Size: DN40-800

Pressure: Up to 16 Bar

Temperature: 0 to +70°C



**Metal seated gate valves**

Metal seated gate valve for isolation. Double Flanged. (PN25 available in certain sizes).

**Specifics:**

Size: DN50-1800

Pressure: 10 + 16 Bar

Temperature: 0 to +70°C



**Fabricated double eccentric butterfly valve**

Carbon or stainless steel fabricated body and disc, elastomer seal and hydraulic or electric actuation.

**Specifics:**

Size: Up to DN3500

Pressure: 10 Bar (DN3500)  
16 Bar (DN2000)  
25 Bar (DN1000)

Temperature: Ambient



**Free discharge valve**

Terminal discharge valve providing atmospheric energy dissipation and flow control. Type – End of line single flanged.

**Specifics:**

Size: DN200-1900

Pressure: Up to 16 Bar

Temperature: 0 to +70°C



**Fixed cone valve**

Carbon and stainless steel fabricated body and gate, elastomer seat and hydraulic or electric actuation.

**Specifics:**

Size: Up to DN2500

Pressure: Up to 16 Bar

Temperature: Ambient



**Radial gate**

Carbon or stainless steel fabricated gate, elastomer seals and hydraulic or electric actuation.

**Specifics:**

Size: Up to 15000 x 7000 mm

Pressure: Gate height

Temperature: Ambient



**Bulkhead gate**

Carbon steel fabricated gate, elastomer seals, normally operated with auxiliary lifting equipment / crane.

**Specifics:**

Size: Up to 15000 x 7000 mm

Pressure: Gate height

Temperature: Ambient



**Bonneted gate**

Carbon or stainless steel fabricated body and gate, bronze seat and hydraulic or electric actuation.

**Specifics:**

Size: Up to 2500 x 3500 mm

Pressure: Up to 20 Bar

Temperature: Ambient



**High pressure ball valves**

Soft and metal seated On/off and control function. Custom made.

**Specifics:**

Size: DN25-1000

Pressure: From 16 to 400 Bar

Temperature: Up to +550°C



**Fabricated high pressure knife gate valve**

Carbon or stainless steel fabricated body and gate, elastomer or bronze seat and hydraulic or electric actuation.

**Specifics:**

Size: Up to DN3500

Pressure: Up to 20 Bar

Temperature: Ambient



**Fabricated tilting check valve**

Carbon or stainless steel fabricated body and disc, metal or elastomer seat and optional hydraulic damper and counterweight

**Specifics:**

Size: Up to DN2000

Pressure: Up to 16 Bar

Temperature: Ambient



**Submerged discharge valves**

Terminal discharge valve providing submerged energy dissipation and flow control. Type – End of line single flanged.

**Specifics:**

Size: DN200-1800 mm

Pressure: 10 + 16 Bar

Temperature: 0 to +70°C



**Flanged double eccentric butterfly valves**

Body and disc in ductile iron. Shaft, and pins in stainless steel. Fusion bonded epoxy coating acc to GSK.

**Specifics:**

Size: DN200-2200

Pressure: 10 + 16 + 25 Bar

Temperature: 0 to +70°C



**Double eccentric butterfly valves**

Double Eccentric butterfly valve with seal on disc design suitable for water applications. Type – Double flanged.

**Specifics:**

Size: DN200 – 2400

Pressure: 10 + 16 Bar

Temperature: 0 to +70°C



**High performance butterfly valves**

Double eccentric design. Available in many high-quality materials. Available as wafer, lugged and double flanged type.

**Specifics:**

Size: DN50-900

Pressure: 20 Bar (class 150)  
50 Bar (class 300)

Temperature: Up to +425°C



**Rubber lined centric butterfly valves**

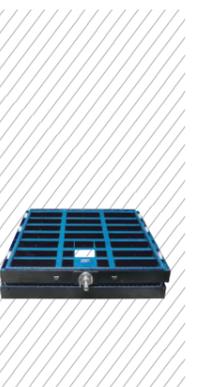
Body, trim and seat materials to customer requirements. Wafer, lugtype, mono flanged and double flanged.

**Specifics:**

Size: Up to DN2000

Pressure: Full vacuum to 20 Bar

Temperature: -30 to +200°C



**Roller gate**

Carbon steel fabricated gate, roller system for guiding purposes, elastomer seals and hydraulic or electric actuation.

**Specifics:**

Size: Up to 6000 x 8000 mm

Pressure: Up to 10 Bar

Temperature: Ambient

# FIRE PROTECTION

		
Outdoor fire protection		
Indoor fire Protection		



**Wet Barrel Fire Hydrant to AWWA**

AVK wet barrel hydrant is designed to be a trouble free, easy to maintain hydrant. Designed so that one person can perform all routine repairs and maintenance.

**Specifics:**

Size:  
DN150

Pressure:  
PN16

Temperature:  
0 to +70°C



**Dry barrel hydrant**

Body, upper and lower barrel in ductile iron. Wedge in ductile iron vulcanized with AVK EPDM rubber. Stem in stainless steel. Stem rod in epoxy coated steel. Fusion bonded epoxy coating acc. to GSK, with UV resistant polyester top coat.

**Specifics:**

Size:  
DN150

Pressure:  
16.1 – 16.5 Bar

Temperature:  
0 to +70°C



**Dry barrel monitor hydrant**

Body, upper and lower barrel, monitor elbow in ductile iron. Wedge in ductile iron vulcanized with AVK EPDM rubber. Stem in stainless steel. Stem rod in epoxy coated steel. Fusion bonded epoxy coating acc. to GSK, with UV resistant polyester top coat.

**Specifics:**

Size:  
DN150

Pressure:  
16.1 Bar

Temperature:  
0 to +70°C



**Telescopic post indicator**

Body in ductile iron. Stem in galvanized steel. Fusion bonded epoxy coating acc. to GSK, with UV resistant polyester top coat.

**Specifics:**

Size:  
DN100-400



**Flanged resilient seated post indicator gate valve**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron vulcanized with AVK EPDM rubber. Fusion bonded epoxy coating acc. to GSK. Operated by Post Indicator. UL/FM approved.

**Specifics:**

Size:  
DN65-400

Pressure:  
16 Bar

Temperature:  
Up to +70°C



**Universal street cover**

Universal street cover for AVK telescopic ext. spindle. Can be used as fixed and floating street cover with deflection ability. Body and distance ring of ductile iron, lid of grey cast iron.

**Specifics:**

Size:  
Lid diameter: 131mm  
Lid inscription: "Fire"



**Flanged resilient seated gate valve OS&Y**

Body, bonnet, yoke and hand wheel in ductile iron. Stem in copper alloy. Wedge in ductile iron vulcanized with AVK EPDM rubber. Fusion bonded epoxy coating acc. to GSK. Operated by hand wheel. UL/FM approved.

**Specifics:**

Size:  
DN65-300

Pressure:  
16 Bar

Temperature:  
0 to +70°C



**Extension spindle for gate valves, fixed length**

Key adaptor #23-32, with spindle adaptor fitting to US type wrench nut

**Specifics:**

Available in following lengths (in mm):  
800    1000  
1250    1500  
2000    3000



**Extension spindle telescopic**

For gate valves, key adaptor #23-32, with spindle adaptor fitting to US type wrench nut

**Specifics:**

Available in following lengths (in mm):  
450-700  
650-1100  
1050-1700  
1700-2900



**Wall post indicator**

AVK wall post indicators are available in three fixed lengths. The handwheel can be locked, and the wall post indicators have a pre-cast threaded boss for mounting a supervisory switch.

**Specifics:**

Size:  
DN65-400



**Flanged resilient seated wrench nut gate valve**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron vulcanized with AVK EPDM rubber. Fusion bonded epoxy coating acc. to GSK. Operated by stem extension.

**Specifics:**

Size:  
DN50-400

Pressure:  
16 Bar

Temperature:  
0 to +70°C



**Rubberlined butterfly valves**

Complete range of butterfly valves in wafer, semi-lug, tapped-lug, u-section, single flange and double flange.

**Specifics:**

Size:  
DN50-2200

Pressure:  
Up to 25 Bar

Temperature:  
Up to +200°C



**Grooved end gate valve**

With Pin Indicator and handwheel according to AWWA C 606 EPDM rubber wedge Epoxy coated according to DIN 30677-2 and GSK guide lines

**Specifics:**

Size:  
DN50-300

Pressure:  
PN16

Temperature:  
0 to 70°C



**Flanged resilient seated pin indicator gate valve**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron vulcanized with AVK EPDM rubber. Fusion bonded epoxy coating acc. to GSK. Operated by hand wheel.

**Specifics:**

Size:  
DN50-400

Pressure:  
10 + 16 Bar

Temperature:  
0 to +70°C



**Flanged concentric butterfly valve**

Body and bonnet in ductile iron. Stem in stainless steel. Wedge in ductile iron vulcanized with AVK EPDM rubber. Fusion bonded epoxy coating acc. to GSK. Operated by hand wheel.

**Specifics:**

Size:  
DN50-300

Pressure:  
10 + 16 Bar

Temperature:  
0 to +70°C





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