

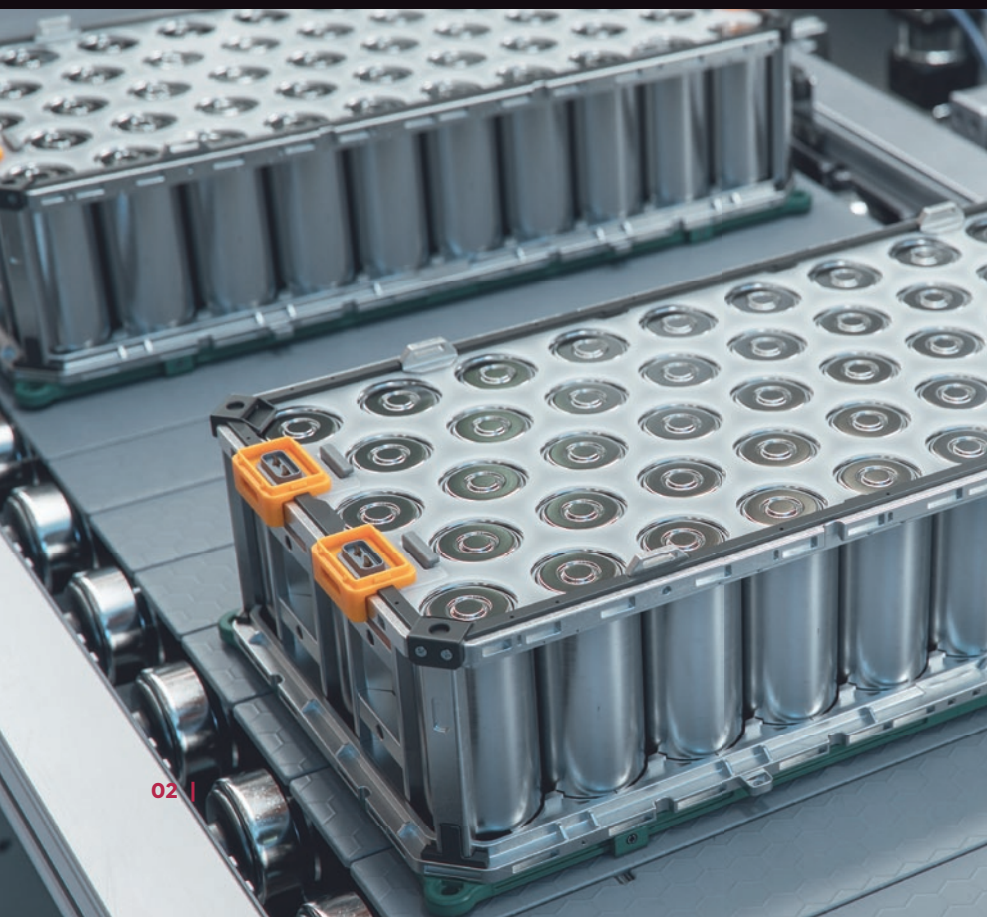
POWERING THE BATTERY PRODUCTION

Butterfly- and Shut-Off Valves
for the battery industry

www.warex-valve.com



WE BRING YOUR BATTERY PRODUCTION ON THE RUN.





PERFECT TAILOR-MADE SOLUTIONS

For 60 years now, we have stood for outstanding quality and reliability.

When it comes to products and systems for demanding media and processes, you are in the best hands with us. Our butterfly and control valves ensure safety and reliability in full containment processes. As a system provider, we can supply you with innovative solutions for safe and reliable process handling in the production of battery cells.

We provide safe, customised shut-off systems.

The climate-friendly, process-optimised production of batteries poses major challenges. As a specialist for the most demanding safety requirements and customer-specific applications, we provide perfect future-proof solutions.

Warex Valves are used with great success in a variety of industrial sectors throughout the world. They are the ideal solution for liquids, gases, abrasive bulk materials and solids in plants with the risk of dust explosions.

Thanks to the use of only the highest quality materials and our proven APS® sealing system, our butterfly valves are ideal for applications where it is important to avoid wear, incorrect operation and contamination in order to minimise risk. With our shut-off valves manufactured in Senden, we provide reliable solutions for the demands of modern battery production. In particular, we supply butterfly valves for highly abrasive battery powders featuring a special, largely non-ferrous metal-free design with a tungsten carbide-coated disc.



ECENTRIC VALVE APS® DKZ 110 SERIE

DKZ 110 APS® DZ

Butterfly Valve with pneumatically charged sealing here with pneumatic actuator. Positioner and fluidization bottom especially suitable for dosing tasks.

→ Range of Nominal Widths: DN 150 – DN 600



The Shut-Off Valve can be employed depending on the used sealing material in a temperature range of – 40°C up to + 200°C.

For the triggering of the pneumatic seal Warex offers different solutions in which the seal can, if necessary, escape freely with vacuum support or be charged with nitrogen.

DKZE 110 APS® DZ

Eccentric Butterfly Valve with pneumatically charged, replaceable profiled sealing ring, placed on a easily demountable carrier ring.

→ Range of Nominal Widths: DN 50 – DN 450



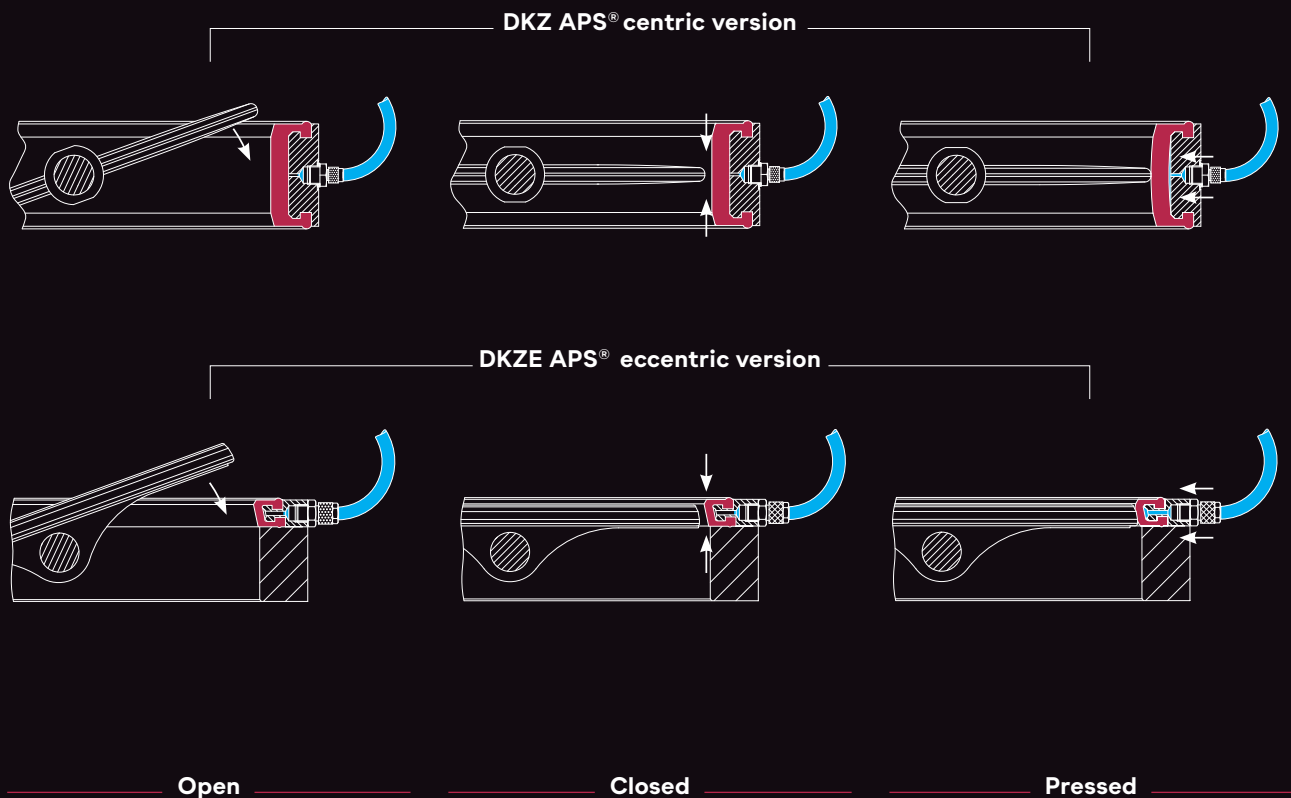
The class DKZE 103 APS® concerns Shut-Off Valves in a simple eccentric type. APS® type indicates (Air-Pressure-Sealing) that the sealing element is pressed pneumatically to the perimeter of the disk in Valve position “closed”.

Within light wears a steady pressure tightness is still guaranteed through the constant contact pressure of the sealing element to the Flap Valve. Therefore it shows a special suitability for abrasive bulk materials.

APS® GUARANTEES MORE TIGHTNESS AND LONGEVITY

THE ADVANTAGES:

- minimized wear, by operation nearly frictionless
- considerably extended durability with abrasive (nonadhesive) products
- considerably lower torque, therefore smaller drives
- maintenance-free design
- exchangeable seals
- EX type for application in 0/20 zones according to EC Type Examination BVS03/Atex-H024X
- Seals with a lateral projection and an additional seal face guarantee a perfect sealing between flanges without additional flange seals
- Shafts and armature head qualified for the construction of the different drive possibilities, cutting point according to DIN/ISO 5211



Open

The special APS® shut-off valve (Air-Pressure-Sealing) has a valve disc which is smaller than the corresponding sealing sleeve. The disc can close easily.

Closed

There is still a small gap remaining between the valve disc and sleeve – in this state, the fitting can be opened again with minimal torque.

Pressed

When the valve is closed, air is blown evenly on the seal, which ensures a secure and gentle shut-off with minimal friction. This is a major benefit with aggressive bulk materials, in particular.

ROTARY VALVE APS® DKZ 110 / 103

Basis of the Rotary Valves are the over many years proved Shut-Off Valves of the centric APS® class. They can be used for charging and blocking.

The APS® construction indicates that the sealing element is pressed pneumatically to the perimeter of the disk in position "closed"! A steady pressure tightness is still guaranteed with slight wears by the constant contact pressure of the sealing element of the Flap Valve.



DKZ 110 APS® ROTARY VALVE

Special Valve for fine dosing to prevent formation of bridges with continuous support and gas-tight shut-off of bulk and granules.

→ Range of Nominal Widths: DN 100 – DN 400



DKZ 103 APS® ROTARY VALVE

Special Valve for fine dosing to prevent formation of bridges with continuous support and gas-tight shut-off of bulk and granules.

→ Range of Nominal Widths: DN 100 – DN 400

CONTAINER BUTTERFLY VALVE DKZ 105

The 105 Series is a range of sealing Shut-Off Valves specially for use under containers or silos. Two basic models are available, the first a light and reasonably priced starshaped design (SK) and secondly a sturdy fully-flanged model (VK). The Valves give an absolute seal as described in DIN EN 12266 Leak Rate A. The housing is one-piece, there are two sealing sleeves to choose from and the sleeve is replaceable or is vulcanized into the armature. This Shut-Off Valve is suitable for both solid and pasty media, but in the main it is used with bulk loads. Can be used for temperatures between -40°C and $+200^{\circ}\text{C}$.



CONTAINER BUTTERFLY VALVE DKZ 105

Container Butterfly Valve type DKZ 105 SK,
star shaped, with ratched hand lever.

→ Range of Nominal Widths: DN 150 – DN 300

DOUBLE FLAP SYSTEM DTS

A differentiation within Double Flap Systems can be made between tact and pressure locks. The Tact Sluices are used normally within lower pressure differences as an inlet or outlet system. They consist of a combination of two Shut-Off Valves with a surge drum. A ventilation system is installed additionally with the pressure and vacuum locks so as to allow a completely pressureless opening or closing of the Valves. Application areas are here e.g. the output from vacuum dryers. The result in combination with the APS® Valves (air-pressure-sealing) is a very high vacuum tightness.



DOUBLE FLAP SYSTEM DTS

For discharging and dosing of bulk materials from
silos, storage bins, sifters, filters, cyclones, etc.

→ Range of Nominal Widths: DN 50 – DN 600



**PASSION FOR
PERFECT SOLUTIONS**



Stauverbrink 2
48308 Senden

Tel. +49 (0) 25 36 - 99 58-0
Fax: +49 (0) 25 36 - 99 58-29

sales@warex-valve.com

www.warex-valve.com