

**zimmerlin**  
EDELSTAHL-TECHNIK

# Covers and inspection openings

## Handling

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# Spring assist with torsion spring

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Type DF/DFD *D = double version*



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The actual design may be different from the picture shown above due to the actual construction of the cover.



## Applications:

- Biotechnology
- Pharmaceutical industry
- Food industry
- Access or inspection openings in sizes NW150 - NW600
- Double version for NW700 - NW900



## Special features:

- Easy to retrofit, with little welding effort
- Support for the operator when opening the lid
- Lifting weight of less than 8 kg for lids e.g. NW600 with a weight of approx. 30 kg



## Advantages:

- + Strengths sizes, therefore adaptable to different torques
- + Compact design
- + Spring assembly easy to dismantle
- + Maximum torque: approx. 100Nm
- + Stop for opening angle at approx. 120°

# Spring assist with capsulated torsion spring

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Type GTF



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## Applications:

- Clean room
- Can be used in potentially explosive environments
- Biotechnology
- Pharmaceutical industry
- Food industry
- Access or inspection openings in sizes NW400 - NW700



## Special features:

- Easy to clean
- Best possible comfort
- Lifting weight of less than 8 kg for lids with a weight up to 50 kg



## Advantages:

- + Internal spring (sealed housing)
- + Spring available in different sizes, therefore adaptable to different torques
- + Compact design
- + Almost frictionless rotation
- + Internal spring can be easily changed
- + Replaceable without welding
- + Hygienic design, approved in accordance with 3A Sanitary Standard
- + Can be used in ATEX-Zone 1 as there is no potential ignition source due to the sealed housing
- + Maximum torque: 180 Nm
- + Spring is designed for long service life
- + Spring force only acts up to a cover opening angle of approx. 90°
- + Stop for opening angle at 110° (interchangeable, also for other opening angles)
- + Option: Locking pin in fully opened position of the lid (screwed version, can also be retrofitted)



# Spring assist with tool spring

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Type WZF/WZFD *D = double version*



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The actual design may be different from the picture shown above due to the actual construction of the cover.



## Applications:

- Spring assist for easy operation
- Effective support for your staff



## Special features:

- More user-friendliness for heavy lids
- Sealed system
- Opening assist similar to the DIN28125
- Possibility of double version must be considered in engineering terms



## Advantages:

- + Horizontal or vertical orientation possible
- + Double version for more spring force
- + Can be used in ATEX-Zone 1 as there is no potential ignition source due to the sealed housing
- + Hygienic design, approved in accordance with 3A Sanitary Standard
- + Preload force can be adjusted
- + Locking bolt can be integrated
- + Springs are available in different sizes, therefore adaptable to different torques
- + Variant D40: Maximum torque 600Nm (depending on the spring combination, in the double version)
- + Variant D50: Maximum torque 1050Nm (depending on the spring combination, in the double version)
- + Can be calculated to match the different torque requirements (depending on lid size, lever arm, weight, centre of gravity, etc.)

# Spring assist with torque shaft

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## Type DMW



Discover our product in detail



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### Applications:

- For large and/or heavy lids
- Can be used in potentially explosive environments
- Biotechnology
- Clean room
- Pharmaceutical industry
- Food industry



### Special features:

- Easy to clean
- Particularly hygienic
- Can be mounted vertically and horizontally
- Internal spring can be preloaded, allowing fine adjustment of the torque



### Advantages:

- + Ball-bearing mechanism
- + Sealed housing
- + Hygienic design
- + Internal compression springs are available in different strengths, allowing the opening aid to be produced with customised torques
- + Can be adjusted to the centre of gravity of the lid
- + Once the tilting point of the lid is reached, the spring creates a damping effect
- + Two different sizes for two max. torques (950Nm and 1900Nm)
- + Spring housing does not move
- + Position of the pivot point can be adjusted in two directions using mounting plates (+/-3mm, horizontal and vertical)
- + Can be used in ATEX-Zone 1 as there is no potential ignition source due to the sealed housing
- + Can be calculated to match the different torque requirements (depending on lid size, lever arm, weight, centre of gravity, etc.)

# Electromechanical hinge

Type EMS



Discover our product in detail



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## Applications:

- Partial automation for opening of the lid
- Biotechnology
- Clean room
- Pharmaceutical
- Food industry



## Special features:

- Easy to clean
- Can be mounted vertically or horizontally
- Easy to connect via industrial connectors



## Advantages:

- + Hygienic design
- + Can be calculated to match the different torque requirements (depending on lid size, lever arm, weight, centre of gravity, etc.)
- + Internal electric linear actuator
- + Spring assisted linear actuator
- + Cover can not fall in case of power failure (self-locking)
- + Fixed housing (no movement)
- + Position of the pivot point can be adjusted in two directions using mounting plates (+/-3mm, horizontal and vertical)
- + Opening angle can be adjusted from 0° to 95°
- + Can be used in ATEX-Zone 21/22
- + Flexible control, selectively via digital signals, common fieldbus systems (CANopen®, Modbus® RTU, IO-Link®) or Industrial Ethernet (EtherNet/IP™, Modbus® TCP/IP)
- + Opening speed and opening angle (max. 95°) can be adopted on your requirements via optional available connection cable and intuitive software to use (standard adjustment: v=10M/s, opening angle: 90°)
- + Bus-connector-cable and Linak Actuator Connect App are optional available



# Mechanical lift and swivel hinge

## Type HSS



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The actual design may be different from the picture shown above due to the actual construction of the cover.



### Applications:

- For limited installation space due to existing pipes or similar
- Clean room
- Potentially explosive environments
- Biotechnology
- Pharmaceutical industry
- Food industry
- Chemicals



### Special features:

- Internal compression spring keeps the lid weight in balance
- Lid is lifted by the handle (approx. 15mm) and opens sideways
- As standard, the direction of rotation and the angle of rotation is free
- Hinge can be welded according to the angle of installation of the cover (design review required)



### Advantages:

- + Screws can be tightened in any order (but crosswise)
- + Internal compression spring can be adjusted to the respective lid weight
- + Fine adjustment of the lifting mechanism by pre-loading the internal compression spring
- + Internal mechanism accessible from above (after unscrewing the cover plate)
- + Rotation via ball-bearing shaft (ease of movement adjustable via "brake")
- + Rotary mechanism and lifting mechanism work independently of each other

- + Almost frictionless rotation
- + Replaceable without welding
- + Easy to clean
- + Can be used in ATEX-Zone 1 as no potential ignition source
- + Maximum lid weight: approx. 100kg
- + Spring is designed for a long service life
- + Locking position can be retrofitted or can be specified individually, standard rotation angle 120° (only in combination with locking function)

# Adjustable hinge for side installation

## Type SES



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### Applications:

- Clean room
- Biotechnology
- Pharmaceutical industry
- Food industry
- Chemicals (covers are installed on the side)



### Special features:

- Lid do not hang due to their own weight
- Consequently, no metal abrasion of the hinges
- Provides the operator a maximum level of comfort



### Advantages:

- + Lid position can be adjusted and fixed in all three axes via the hinge
- + Sealed housing
- + Rotary shaft mounted on plastic plain bearings
- + Simple adjustment, with few tools only
- + Also suitable for large and heavy lids
- + Easy to clean
- + Easy to readjust



# Worldwide sales network

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## Germany / Rest of the world

zimmerlin GmbH Edelstahl-Technik  
[www.zimmerlin.de](http://www.zimmerlin.de)

## Great Britain / Ireland

Vessel Technologies Ltd (Vestec)  
[www.vestec.ie](http://www.vestec.ie)

## Portugal / Spain

HallTech  
[www.halltech.biz](http://www.halltech.biz)

## France

Gallet Equipements Industriels Sarl  
[www.gallet-fr.com](http://www.gallet-fr.com)

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[www.montakon.com](http://www.montakon.com)

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Pohling s.r.l.  
[www.pohling.it](http://www.pohling.it)

## Switzerland

Helmut Breschan AG  
[www.pofaro.ch](http://www.pofaro.ch)

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OEM Automatic KLITSO A/S  
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## Poland

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## Romania / Hungary

Metaball Kft.  
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## China

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[www.sansheng-sh.com](http://www.sansheng-sh.com)

## Japan

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[www.yoshitake-inc.com](http://www.yoshitake-inc.com)

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