

## Operating and installation instructions

# Rotary modules

### DM 4 Z, DM 5 Z, DM 6 Z

#### Items included in the delivery

The rotary module with intermediate stop is supplied fully packaged. A listing of delivery contents can be found in the catalog entitled „Domino handling components“.



**Note:**

Deliveries must be checked to ensure they are complete and in perfect condition.

#### Technical data

Please see catalog: „Domino handling components“

#### Safety notes



**Warning:**

When installing the rotary module with intermediate stop, you must switch the power supply off. Both local and product-specific safety instructions must be observed without fail.

#### Installation and integration of DM 4 Z, DM 5 Z, DM 6 Z

##### Adjusting angle of rotation, fig 1

1. Remove cap nut (1). (SW13=DM4 / SW17=DM5 / SW24=DM6)
2. Loosen counter nut (2). (SW13=DM4 / SW17=DM5 / SW24=DM6)
3. Screw the stop shock absorber (3) forwards or backwards to set the specific travel path of the rotary plate (4).
4. Tighten counter nut (2) again and screw cap nut (1) back on.

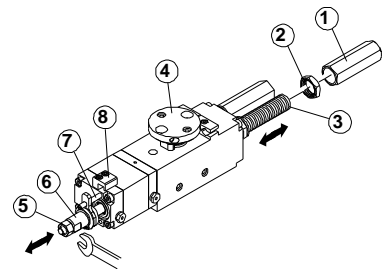


fig 1

##### Adjusting angle of rotation, intermediate stop, fig 1

1. Loosen nut (5). (SW8=DM4 / SW10=DM5 / SW13=DM6)
2. Screw adjusting sleeve (6) forwards or backwards to set the intermediate position.
3. Tighten nut (5) again. (SW8=DM4 / SW10=DM5 / SW13=DM6)



**Note:**

You will find detailed information on adjusting the intermediate stop in the attached sheet.

##### Adjusting limit switch, fig 2

5. Loosen M3 clamping screws (1).
6. Move sensor (2) into the sensor holder and screw tight with a distance of 0.5 mm to the sensor flag (3).

##### Adjusting intermediate stop limit switch

7. Loosen clamping screws (4).
8. Move sensor (2) into the sensor holder (5) and screw tight with a distance of 0.5 mm to the switch vane (6).



**Note:**

In any case, the travel path must be checked as the full travel path of 180° is set in the factory. The 90° degree type differs from the 180° type only as far as the switch vane is concerned.



**Caution:**

The sensor must not touch the sensor flag or it will be damaged. A distance of 0.5 mm between the sensor and sensor flag must be maintained without fail.



**Note:**

The wiring and connection of the limit switch must be carried out according to the manufacturer's instructions!

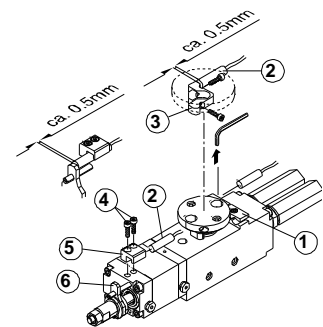


fig 2

##### Compressed air connection, fig 3 + 4

1. Remove protection plug (1) and fit exhaust air throttle.
2. Fit threaded stopper (2) to free compressed air connections.
3. Connect pneumatic hoses as per diagram.
4. Adjust exhaust air throttle (speed).

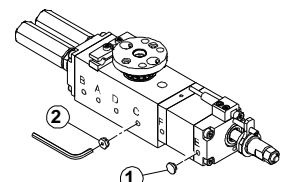


fig 3

Function: Rotary module (compressed air connections A and B).  
 Function: Combination with parallel or angle gripper (compressed air connections C and D). Please see fig 4.  
 Function: Intermediate stop (compressed air connections E and F).



**Caution:**

Exhaust air throttles must be used without fail in order to comply with permissible operating conditions. Adjust exhaust air throttles in such a way that the rotary plate travels to the end positions without banging.

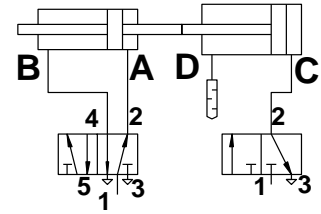


fig 4

**Options (extension - parallel or angle gripper, fig 5)**

- Loosen (pointed) threaded pin (1) on rotary plate. (M4=DM4 / M5=DM5 / M5=DM6)
- Simply attach the module (parallel or angle gripper) (2) with the centering couplings and tighten threaded pins (1) to secure it.



**Note:**

When coupling pneumatic components, make sure they are well greased!

You can find detailed information on the parallel gripper (PG ...) and angle gripper (WG ...) in their respective instructions.

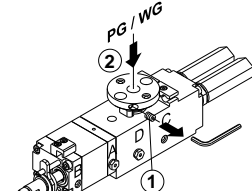


fig 5

**Remedying faults**

Problem	Cause/Remedy
<b>Rotary module does not move</b>	<ul style="list-style-type: none"> <li>Check air supply (3 – 7 bar).</li> <li>Pressure dropped below minimum level</li> <li>Air lines mixed up</li> <li>Throttle valves closed</li> <li>Unused connections not capped</li> <li>Foreign body under rotary plate</li> </ul>
<b>Travel path incorrect</b>	<ul style="list-style-type: none"> <li>Foreign body under rotary plate</li> <li>Pressure dropped below minimum level</li> <li>Stop shock absorber not set up correctly</li> </ul>
<b>Module moves jerkily or too quickly</b>	<ul style="list-style-type: none"> <li>Throttle valves missing or incorrectly set</li> <li>Load too great (please see data sheet in catalog)</li> </ul>
<b>Module moves too slowly</b>	<ul style="list-style-type: none"> <li>Throttle valves set incorrectly</li> </ul>
<b>The motive power is declining</b>	<ul style="list-style-type: none"> <li>Check air supply</li> <li>Check seals</li> <li>Clean and lubricate rotary module</li> </ul>

**Maintenance and lubrication instructions**

To ensure perfect operation of the module the following must be observed:

- The compressed air must be filtered, dry, oiled or oilless.
- Modules must be inspected and cleaned regularly.

**Shock absorbers:**



**Note:**

Top quality shock absorbers are used in the modules. Faulty shock absorbers reduce the service life of modules considerably and the accuracy and reproducibility of end positions can no longer be guaranteed.



**Caution:**

Make sure without fail that the rotary plate does not slam into its end position as this can destroy the shock absorbers. If the shock absorbers are destroyed, they must be replaced without delay.

**Lubrication**



**Note:**

We recommend relubricating pneumatic cylinders after approx. 5 million cycles. Unscrew the side caps. Lubrication involves direct application on the cylinder wall (grease type: Mobilgrease 28) and manual rotation of the rotary plate several times (repeat procedure 3 or 4 times).