



Hydraulic Rotary Actuators for
Waste Collecting Vehicles

Front loader • Side loader • Rear loader



**WHY HKS IS YOUR
BEST CHOICE:**

- ✓ Larger rotation angle without switching
- ✓ Can assume bearing support
 - ✓ No exposed piston rod
- ✓ More compact than cylinders
 - ✓ Maintenance-free
- ✓ Our actuator can potentially replace multiple cylinders
 - ✓ High torque

**MANUFACTURING PRECISION
OF THE HIGHEST QUALITY**

UPGRADE FOR YOUR WASTE COLLECTION VEHICLES

SPACE-SAVING, ROBUST, AND MAINTENANCE-FREE ALTERNATIVE TO OUTDATED CYLINDER SYSTEMS.

HKS is your manufacturer of rotary actuators for front-, side-, and rear-loader waste disposal vehicles ▶ Made in Germany

MANY REASONS TO CHOOSE HKS ROTARY ACTUATORS



Very compact – much less space required than cylinders

Our hydraulic rotary actuators require considerably less installation space compared to conventional cylinders. This saves valuable space in vehicle design and enables more compact, efficient waste disposal systems – a clear advantage when faced with tight design specifications and complex superstructures.



Can assume bearing support

The integrated bearing function of the rotary actuators ensures stable and precise rotary movement. This eliminates the need for additional bearings or complex mounting elements, simplifying the design and increasing reliability. Moreover, support points required for cylinders are no longer necessary.



Larger rotation angles than cylinders

With our rotary actuators, significantly larger rotation angles are achievable compared to conventional cylinders. This flexibility offers more design freedom for handling and movement control of waste disposal vehicles.



Maintenance-free

Our rotary actuators are designed to be virtually maintenance-free. This reduces downtime and maintenance costs, providing substantial economic relief—especially in demanding applications worldwide.



Robust – no piston rods like cylinders that can be damaged

The absence of exposed piston rods makes our rotary actuators particularly robust and resistant to dirt, shocks, and mechanical stresses. In challenging waste disposal environments, this protection results in a long service life.



Consistent and equal torque in both rotation directions

Our rotary actuators deliver a constant, even torque in both directions—enabling precise, reliable movements without loss of power or imbalance. This enhances control and safety when operating waste disposal vehicles.



High adaptability via custom solutions

For over 55 years, we have been manufacturing rotary actuators precisely tailored to customer specifications—in size, shape, and performance. This ensures perfect integration into your specific vehicle configurations and optimal functionality.



HYDRAULIC ROTARY ACTUATOR M-DA-H F2

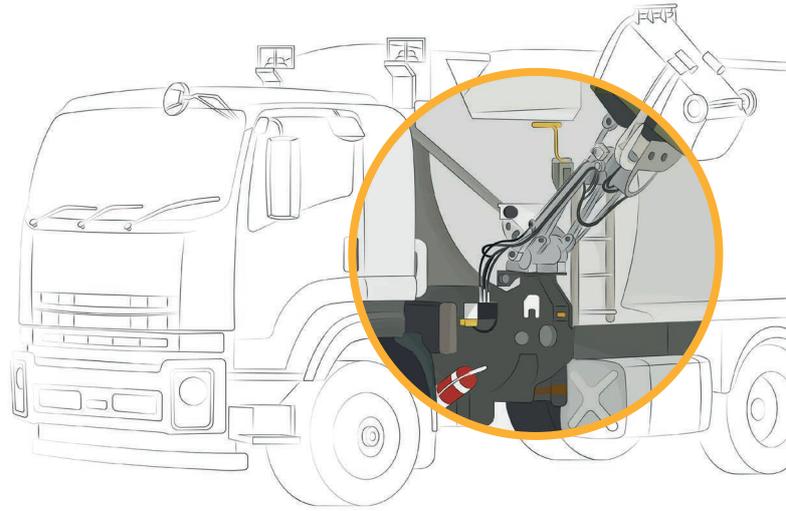
**COMPACT, ROBUST, AND PROVEN IN
HEAVY-DUTY CONTINUOUS USE.**

The M-DA-H F2 was specially designed for the demanding requirements of waste disposal vehicles and has established itself over decades as a reliable partner in this market segment. With its small diameter and extremely compact design, the M-DA-H F2 is ideal for applications where space-saving integration and high performance are critical.

Thanks to its maintenance-free design—free of grease fittings or external lubrication points—the M-DA-H F2 significantly reduces maintenance efforts and increases vehicle availability. The hydraulic components are optimised to operate reliably and durably under the harshest conditions typical in waste management. The sealing systems are highly resistant to contaminants, dust, and moisture, ensuring safe and efficient torque transmission even after decades of use.

Technically, the M-DA-H F2 impresses with precise gearing quality and uniform torque in both directions, which not only improves controllability but also minimises mechanical stresses on the vehicle frame. The absence of piston rods makes the actuator especially robust against impacts and damage—an indispensable feature in harsh operating environments. Due to its compact design with small diameters, the M-DA-H F2 suits a wide range of design requirements and integrates flexibly into existing systems.

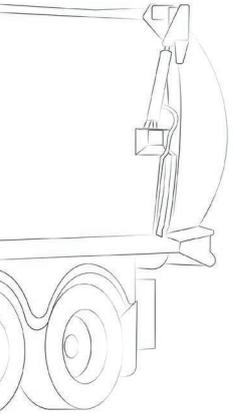
With the M-DA-H F2, you choose a hydraulic rotary actuator that stands out with decades of experience, reliable technology, and highest quality standards—perfectly tailored to the needs of the international market.



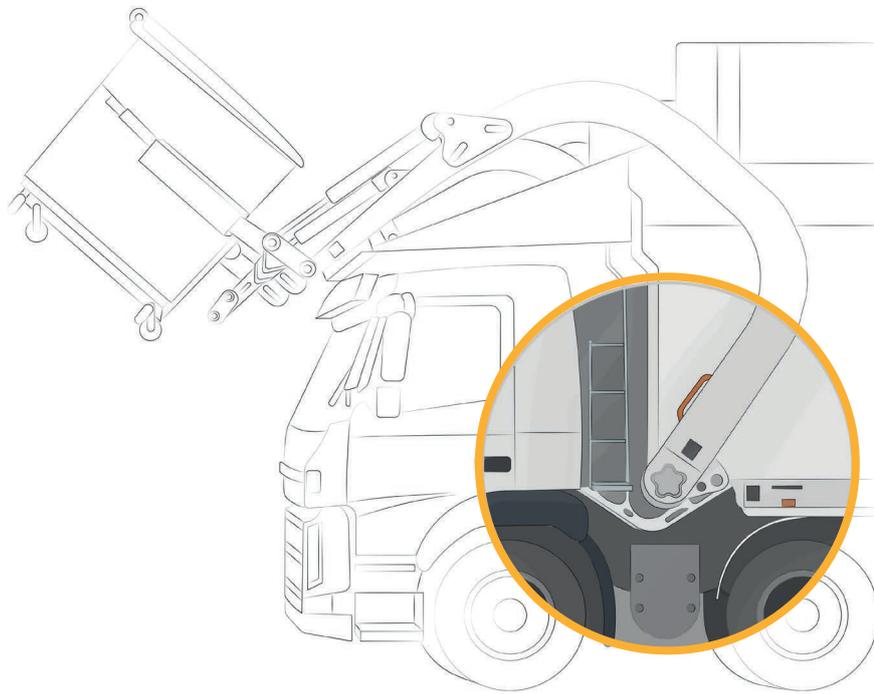
EQUIPPED OVER
20,000
WASTE COLLECTION
VEHICLES



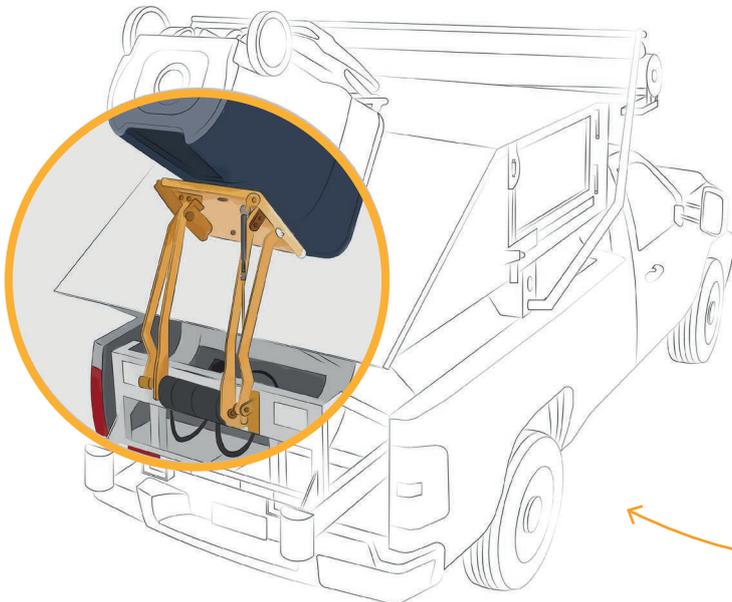
SIDE- LOADER



FRONT- LOADER



REAR- LOADER



EFFICIENT CHOICE: ROTARY ACTUATOR OR CYLINDER?



M-DA-H F2

- Rotation angle 220° and more
- Easiest installation
- Can assume bearing support
- Maintenance-free
- Minimal installation space
- Rotation point = rotary actuator
- Higher safety: no interference from protruding parts
- Uniform torque over full rotation range



CYLINDER

- Maximum rotation angle 90°
- More complex implementation
- Possibly two cylinders required
- Complex control wiring
- Support points necessary
- Two bearing points required
- Lower safety
- Variable torque during rotation



M-DA-H F2

- Surface hardened
- Wear resistant
- Maintenance-free
- High-quality seals
- German Engineering and Made in Germany
- Highest durability
- „Install and forget“
- Decades of experience
- High-strength steel



CONVENTIONAL ROTARY ACTUATOR

- Not surface hardened
- Wear-prone
- Not maintenance-free
- Vulnerable seals
- Neither „German Engineering“ nor „Made in Germany“
- Lack of expertise
- Inferior steel quality

DATA AND FACTS

**NO
BOTHERSOME CYLINDERS
OR PROTRUDING
CONTOURS**



**LESS RISK OF INJURY
DUE TO PROTRUDING
CYLINDERS.**

1 | GENERAL CHARACTERISTICS

The rotary actuators of the M-DA-H series with F2 are primarily designed for mobile applications. Based on trapezoidal thread technology, a compact solution with max operating pressure of 210 bar and torque up to 6,300 Nm is realized. The harmonious design and compact construction complete the overall positive impression. Use of high-quality materials guarantees maximum durability.

2 | APPLICATION AREAS

Applications range from front, side, and rear loaders to special bodies with individual requirements.

3 | ROTATION ANGLE

M-DA-H F2 series actuators are available with rotation angles up to 360°. Any

additional or intermediate rotation angles can be supplied. A typical rotation angle for this industry is 220°.

4 | SWING TIMES

The M-DA-H series is characterized by fast, load-dependent swing times.

5 | PRESSURES, SEALS AND TEMPERATURES

The M-DA-H series is designed for a max operating pressure of 210 bar. Mineral oils according to ISO VG 46 are recommended. Actuators with standard seals should be operated in a temperature range of -18 °C to +70 °C. At higher or lower temperatures, special seals are necessary.

TECHNICAL DATA

M-DA-H F2

Model	Torque (Nm)	Operating pressure (bar)	Rotation angle (degrees)	Minimum temperature	Maximum temperature	Displacement (dm ³)	Weight (kg)
M-DA-H-F2 120 220° S10752	3050	210	220	-18°C	70°C	0,806	35
M-DA-H-F2 120 220° S9139	2900	210	220	-18°C	70°C	0,762	34
M-DA-H-F2 140 220° S8183	5090	210	220	-18°C	70°C	1,386	59
M-DA-H-F2 150 220° S9299	6300	210	220	-18°C	70°C	1,807	84,4



HKS – TURN THE WORLD

MODERN GERMAN ENGINEERING

Since the foundation of today's HKS Dreh-Antriebe GmbH, we have pioneered new paths in mechanical engineering. Since 1970, when it comes to custom hydraulic and pneumatic rotary actuators, there has been one name you can trust without compromise: **HKS is your specialist** for unbeatable quality, safety, and performance.

For over 55 years, HKS Dreh-Antriebe GmbH has been **developing, designing, manufacturing, and distributing** compact hydraulic and pneumatic rotary actuators for rotation and tilting of loads—accelerated, decelerated, precisely positioned, and held—for customers from a wide range of industries.

We rely **on the latest fully automated CNC machines** with almost 100% manufacturing depth to meet all customer-specific requirements.

OUR LOCATIONS



LEIPZIGER STRASSE 53-55
63607 WÄCHTERSBACh / AUFENAU
GERMANY



IN DEN PFLANZENLÄNDERN 9-11
63607 WÄCHTERSBACh / AUFENAU
GERMANY



BÖNNIGHEIMER RING 23
01904 NEUKIRCH / LAUSITZ
GERMANY