

A EXPLODED VIEWS & SPARE PARTS

Each numbered balloon in the exploded view corresponds to a position in the spare parts list (BOM). To order spare parts, state the **model**, the **serial number** and the **position number**.

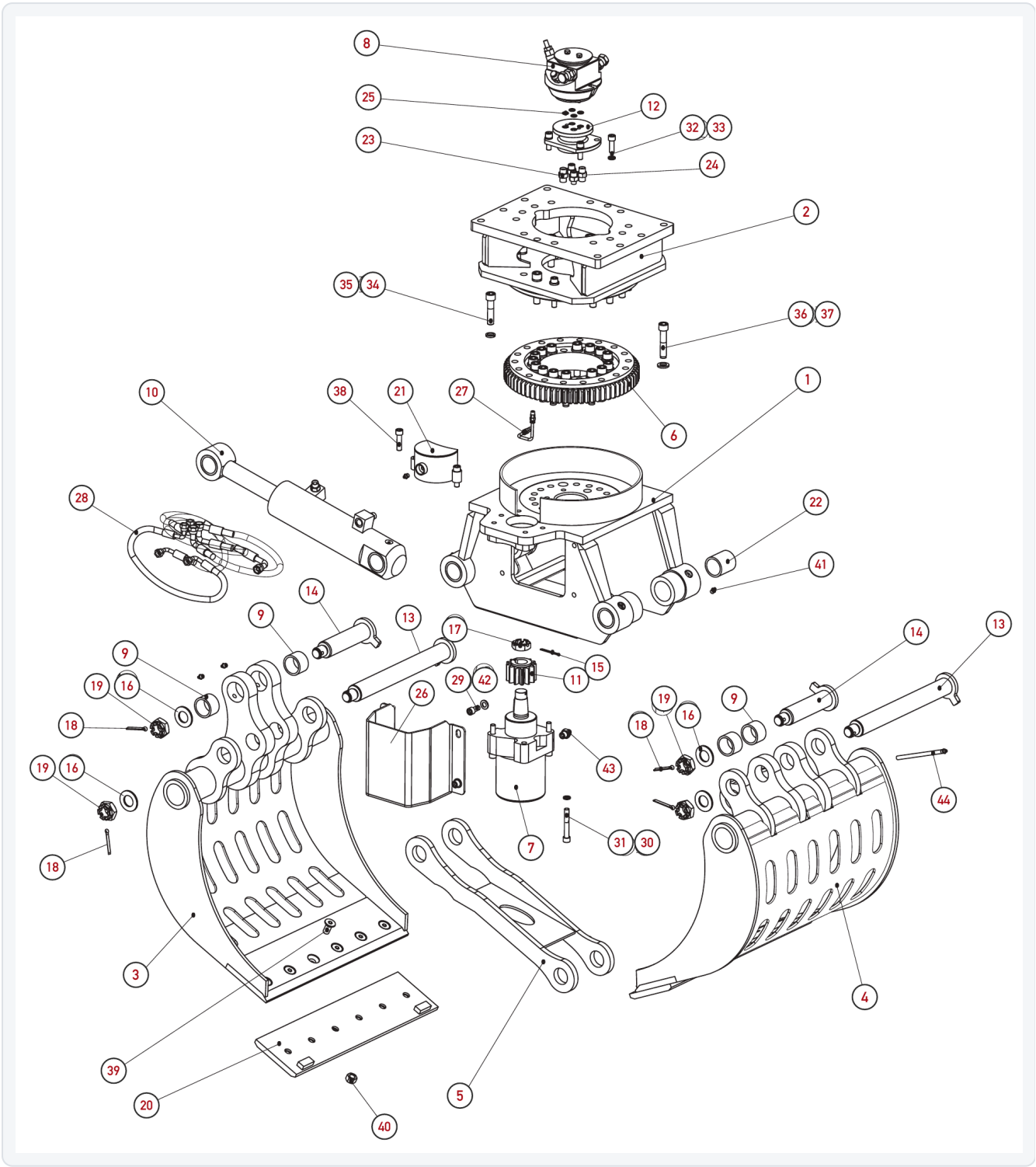


NEED SPARE PARTS?

Scan the QR code to access the spare-parts catalogue and the technical documentation.

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A.1 GENERAL EXPLODED VIEW · MG-450



General exploded view of the MG-450 bivalve grapple. Positions 1–44 correspond to the spare parts list (A.2).

A.2 SPARE PARTS LIST

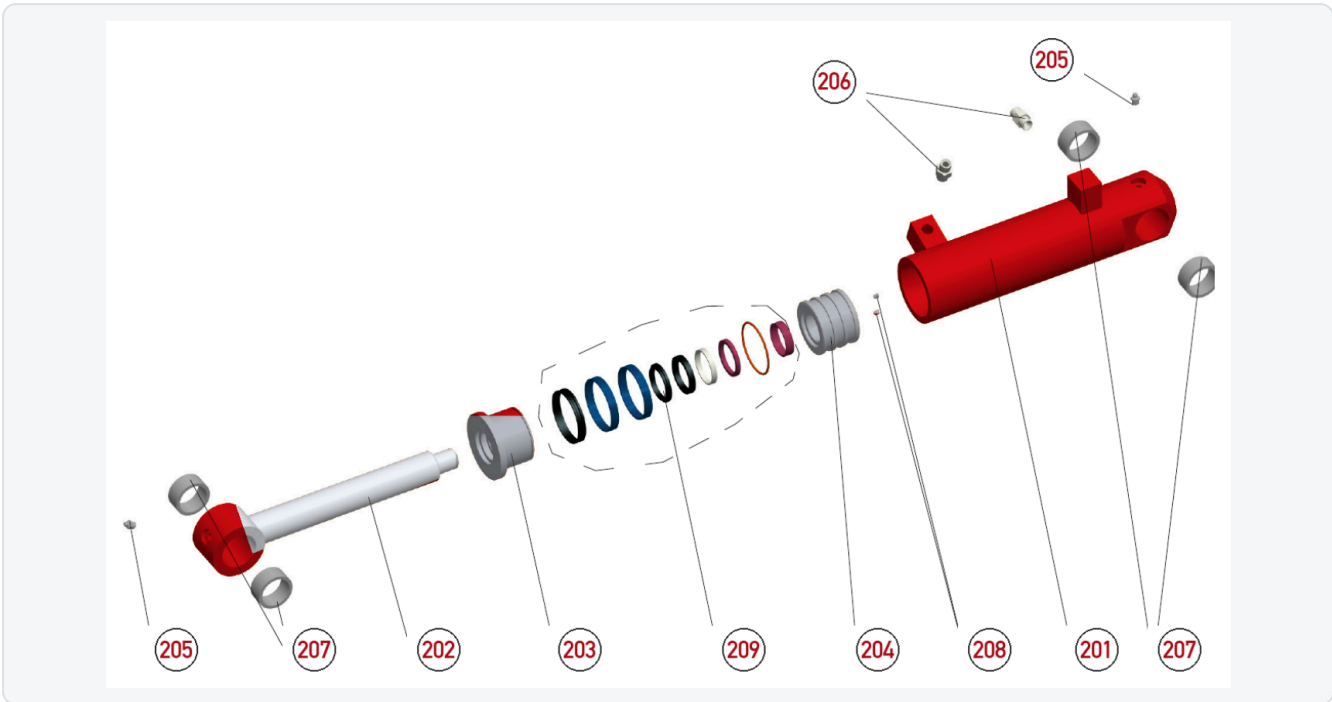
Document MG-450-PL-ES-01 · Rev 1.0 · 2026-06-21. MHA numbering **MG-0450-CC-NNN** · CC: 01 Structure · 02 Transmission · 03 Hydraulic · 04 Joints · 05 Bolts · 06 Seals · 07 Fittings · 08 Greasing. Dimensions in mm (SI); G threads per ISO 228-1; bolts to ISO/DIN.

NO.	MHA REFERENCE	QTY	DESCRIPTION	DIMENSION / STANDARD
1	MG-0450-01-001	1	Main frame, welded assembly	–

NO.	MHA REFERENCE	QTY	DESCRIPTION	DIMENSION / STANDARD
2	MG-0450-01-002	1	Rotator frame, welded assembly	—
3	MG-0450-01-003	1	Grapple shell, LH (short lever)	—
4	MG-0450-01-004	1	Grapple shell, RH (long lever)	—
5	MG-0450-04-001	1	Tie-rod link, welded assembly	—
6	MG-0450-02-001	1	Slewing ring	—
7	MG-0450-02-002	1	Hydraulic motor	Ref. 530375T3831AAAAA
8	MG-0450-02-003	1	Swivel joint, complete (C.O.D.)	—
9	MG-0450-02-004	4	Plain bearing bush	Øi45 × Øo55 × L35 mm
10	MG-0450-03-001	1	Hydraulic cylinder	—
11	MG-0450-02-005	1	Drive gear	—
12	MG-0450-01-005	1	Plate	—
13	MG-0450-04-002	2	Main pivot pin	—
14	MG-0450-04-003	2	Tie-rod pivot pin	—
15	MG-0450-05-001	1	Cotter pin	Ø4 × 50 mm — ISO 1234
16	MG-0450-05-002	4	Disc spring (Belleville)	DIN 2093
17	MG-0450-05-003	1	Hexagon castle nut	DIN 935
18	MG-0450-05-004	4	Cotter pin	Ø6.3 × 65 mm — ISO 1234
19	MG-0450-05-005	4	Hexagon castle nut	M30 × 2 — DIN 935
20	MG-0450-01-006	2	Replaceable wear blade	—
21	MG-0450-01-007	1	Cover	—
22	MG-0450-02-006	4	Plain bearing bush	Øi45 × Øo55 × L60 mm
23	MG-0450-07-001	2	Hydraulic adaptor	G3/8 — ISO 228
24	MG-0450-07-002	2	Hydraulic adaptor	G3/8 — G1/4 — ISO 228
25	MG-0450-06-001	4	O-ring	Ø11.8 × 2.4 mm — ISO 3601
26	MG-0450-01-008	1	Cover	—
27	MG-0450-08-001	1	Lubrication pipe	—
28	MG-0450-03-002	1	Hydraulic hose kit	—
29	MG-0450-05-006	4	Hex socket head cap screw	M12 × 25 — ISO 4762
30	MG-0450-05-007	4	Hex socket head cap screw	M12 × 80 — ISO 4762
31	MG-0450-05-008	4	Nord-Lock washer	para M12
32	MG-0450-05-009	4	Hex socket head cap screw	M12 × 35 — ISO 4762
33	MG-0450-05-010	4	Spring lock washer	para M12 — DIN 127
34	MG-0450-05-011	12	Hex socket head cap screw	M16 × 70 — ISO 4762
35	MG-0450-05-012	12	Nord-Lock washer	para M16
36	MG-0450-05-013	16	Hex socket head cap screw	M16 × 75 — ISO 4762
37	MG-0450-05-014	16	Nord-Lock washer	para M16
38	MG-0450-05-015	2	Hex socket head cap screw	M12 × 50 — ISO 4762
39	MG-0450-05-016	12	Hex socket head cap screw	M16 × 35 — ISO 4762
40	MG-0450-05-017	12	Hexagon nut	M16 — ISO 4032
41	MG-0450-08-002	8	Grease nipple	M10 × 1 — DIN 71412
42	MG-0450-05-018	4	Plain washer	para M12 — ISO 7089
43	MG-0450-07-003	2	Hydraulic adaptor	G1/2 — G1/4 — ISO 228
44	MG-0450-08-003	1	Lubrication pipe	—

Bolt tightening torques: see ch. 7.3. For replacements, use exclusively original MHA spare parts, stating the full reference.

A.3 HYDRAULIC CYLINDER EXPLODED VIEW · POS. 10



Exploded view of the hydraulic cylinder (position 10 of the general list A.2). Own numbering 201–209.

 NOTICE

The MHA references (MG-0450-03-2NN) are provisional; when ordering, state the position number and confirm the reference with MHA.

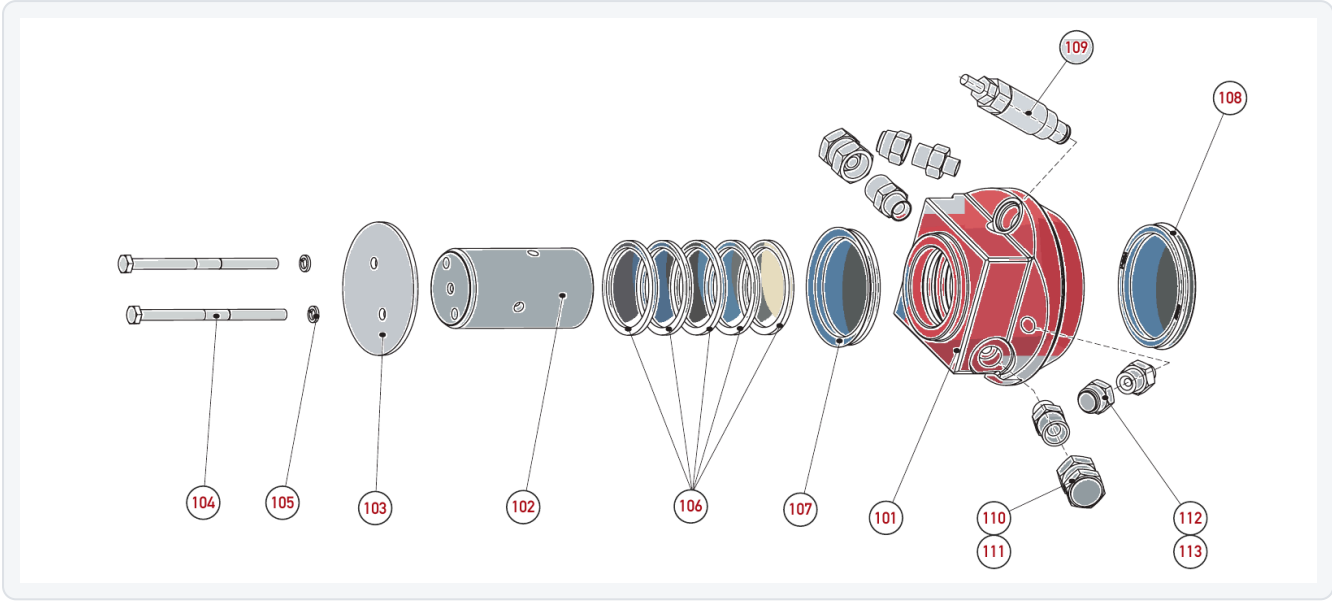
A.4 CYLINDER PARTS LIST

Assembly: **Complete hydraulic cylinder** · MHA ref. **MG-0450-03-001** (pos. 10 of A.2, 1 pc). Positions 201–209 are its components.

NO.	MHA REFERENCE	QTY	DESCRIPTION	DIMENSION / STANDARD
–	MG-0450-03-001	1	Hydraulic cylinder assembly	assembly
201	MG-0450-03-201	1	Cylinder Body	–
202	MG-0450-03-202	1	Piston Rod	–
203	MG-0450-03-203	1	Cover	–
204	MG-0450-03-204	1	Piston	–
205	MG-0450-03-205	2	Grease Nipple	M10 × 1.0
206	MG-0450-03-206	2	Adapter	BSP G3/8
207	MG-0450-03-207	4	Bearing Bush (Cylinder)	Øi45 × Øo55 × L25 mm
208	MG-0450-03-208	1	Plug	–
209	MG-0450-03-209	1	Seal Kit (Cylinder)	juego / set

The cylinder is usually repaired with the **seal kit (209)**. For a complete repair, also order the bushes (207) and, where applicable, the piston rod (202) and the piston (204).

A.5 SWIVEL JOINT (C.O.D.) EXPLODED VIEW · POS. 8



Exploded view of the complete C.O.D. swivel joint (position 8 of the general list A.2). Own numbering 101–114.

A.6 SWIVEL JOINT (C.O.D.) PARTS LIST

Assembly: **Complete swivel joint (C.O.D.)** · MHA ref. **MG-0450-02-003** (pos. 8 of A.2, 1 pc). Positions 101–114 are its components.

NO.	MHA REFERENCE	QTY	DESCRIPTION	DIMENSION / STANDARD
–	MG-0450-02-003	1	Swivel joint (C.O.D.)	assembly
101	MG-0450-02-101	1	Swivel joint housing	–
102	MG-0450-02-102	2	Swivel joint rotor	–
103	MG-0450-02-103	1	Swivel joint cover	–
104	MG-0450-02-104	2	Hex bolt	M8 × 130 · 12.9
105	MG-0450-02-105	2	Spring washer (set of 2)	D8
106	MG-0450-02-106	5	Rotating shaft seal	60 × 71 × 4
107	MG-0450-02-107	1	Dust seal	VA85
108	MG-0450-02-108	1	Dust seal	VA90
109	MG-0450-02-109	1	Relief valve spool	HBS-C010203-01-00
110	MG-0450-02-110	2	Connector (adaptor)	G3/8 – G1/2
111	MG-0450-02-111	2	Adapter cover	BSP G1/2
112	MG-0450-02-112	2	Connector (adaptor)	G1/4 – G1/8
113	MG-0450-02-113	2	Adapter cover	BSP G3/8
114	MG-0450-02-114	1	Seal kit	juego / set

For rotation leaks, the usual replacement is the **seal kit (114)** together with the shaft seals (106) and dust seals (107, 108).