

## *Central Lubrication Pumps Helios Junior*



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Subject to modifications

- **Before putting the pump into operation, read carefully these operating instructions**
- **Observe the safety instructions**
- **Keep these operating instructions on the site where the pump will be in operation.**

**Safety Instructions**



- All the components of the connected centralized lubrication system must be designed for maximum system pressure.
- Repairs may only be carried out by qualified, skilled personnel using only original spare parts.
- Do not touch internal parts of the reservoir while the pump is in operation.
- Refill the pump reservoir in time with clean lubricant.
- The manufacturer is not liable for damages due to inadequate handling.

**Pump types**  
**(all types have a 3-dm<sup>3</sup> reservoir):**

HJ2 L-30	Part. no. 603-40558-3	left-hand hand lever 1 outlet
HJ2 R-30	Part. no. 603-40558-4	right-hand lever, 1 outlet
HJ2AL-30	Part. no. 603-40558-1	left-hand hand lever 2 outlets
HJ2AR-30	Part. no. 603-40558-2	right-hand hand lever 2 outlets

If necessary, the hand lever may be changed from one side to the other.

**Description of Operation**

The central lubrication pump type HJ is equipped with 2 delivery pistons which are moved forward and backward via a hand lever. As a result, they alternately suck in the lubricant from the reservoir and dispense it to the outlets. In the case of the HJ pump the lubricant output of the two pistons is combined to one outlet.

The lubricant output of 1 cm<sup>3</sup> per each lever movement is reached when a full movement - forward or backward - is carried out from stop to stop.

The movement of the lever leads to a rotation of the stirring paddle in the reservoir.

The rotation of the stirring paddle causes the lubricant to be homogenized, vented and dispensed to the suction boreholes.

**Appropriate Use**

The central lubrication pump type Helios Junior (HJ) is a hand-operated high-pressure pump used for the supply of lubricating greases in centralized lubrication systems. The maximum values mentioned in the technical data must not be exceeded.

**Technical Data**

	Type	HJ2	HJ2A
Number of outlets:		1	2
Lubricant output per lever movement:		2 cm <sup>3</sup>	2x1 cm <sup>3</sup>
Operating pressure:		300 bar	
Max. pressure:		500 bar	
Hand force at max. pressure:		300 N	
Suitable lubricants:		grease up to NLGI-grade 3	
		acc. to DIN 51818	
		(as a function of the ambient temp.)	
Threaded connection:		G 1/4"	
Reservoir capacity:		3 dm <sup>3</sup>	
Weight empty:		8,7 kg	8,9 kg

**Accessories**

Order the check valves required for the pump outlet separately and in accordance with the number and diameter of the tube line(s):

Check valve for tube: Ø 6 mm:	GERV 6-SG 1/4AVC Part. no. 223-13052-1
Check valve for tube: Ø 8 mm:	GERV 8-L G 1/4AVC Part. no. 223-13052-2
Check valve for tube: Ø 10 mm:	GERV 10-LG1/4AVC Part. no. 223-13052-3

**Examples of Application**

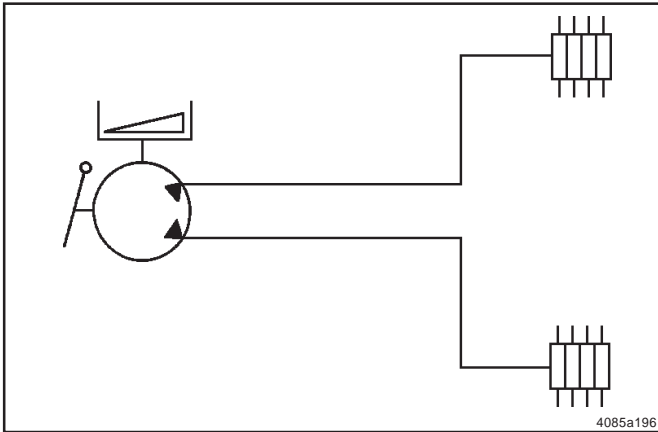


Fig. 1: HJ2A with 2 outlets, used as a supply pump in a progressive system

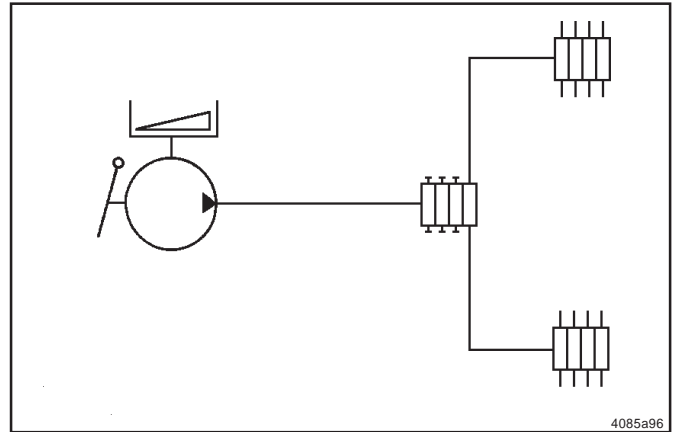


Fig. 2: HJ2 with 1 outlet, used as a supply pump in a progressive system with one main metering device

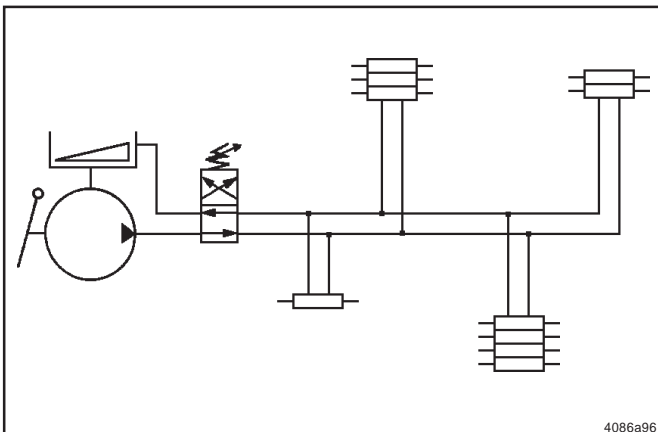


Fig. 3: HJ2 with 1 outlet, used as a supply pump in a small two-line system

**Installation and Operating Instructions**

Installation site requirements

- even, solid and vibration-free surface
- protected from dust and dirt
- protected against atmospheric influences
- Sufficient space for operating the hand lever and for refilling the lubricant reservoir

Position of installation:      reservoir vertical

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**Putting into Operation**

Before putting the pump into operation, fill the reservoir with lubricant.

Attention



- Do not touch the internal parts of the grease reservoir while the pump is in operation.
- Risk of injury due to the stirring paddle.

- When filling the reservoir, pay attention that no foreign particles or dirt enter the reservoir.
- Always refill the reservoir in time.
- Avoid contamination in the pump area.



- All the components connected to the system installed downstream of the pump and on which the hydraulic pump pressure has an influence (e.g. change-over valve, metering devices, tube lines, tube fittings, hoses) must be designed for maximum system pressure.

**Maintenance and Repair**



**Before undertaking any repair on the pump, observe the following:**

- Loosen the pressure connection fittings in order to decrease the pressure in the system. Risk of injury due to lubricant splashing under out high pressure.

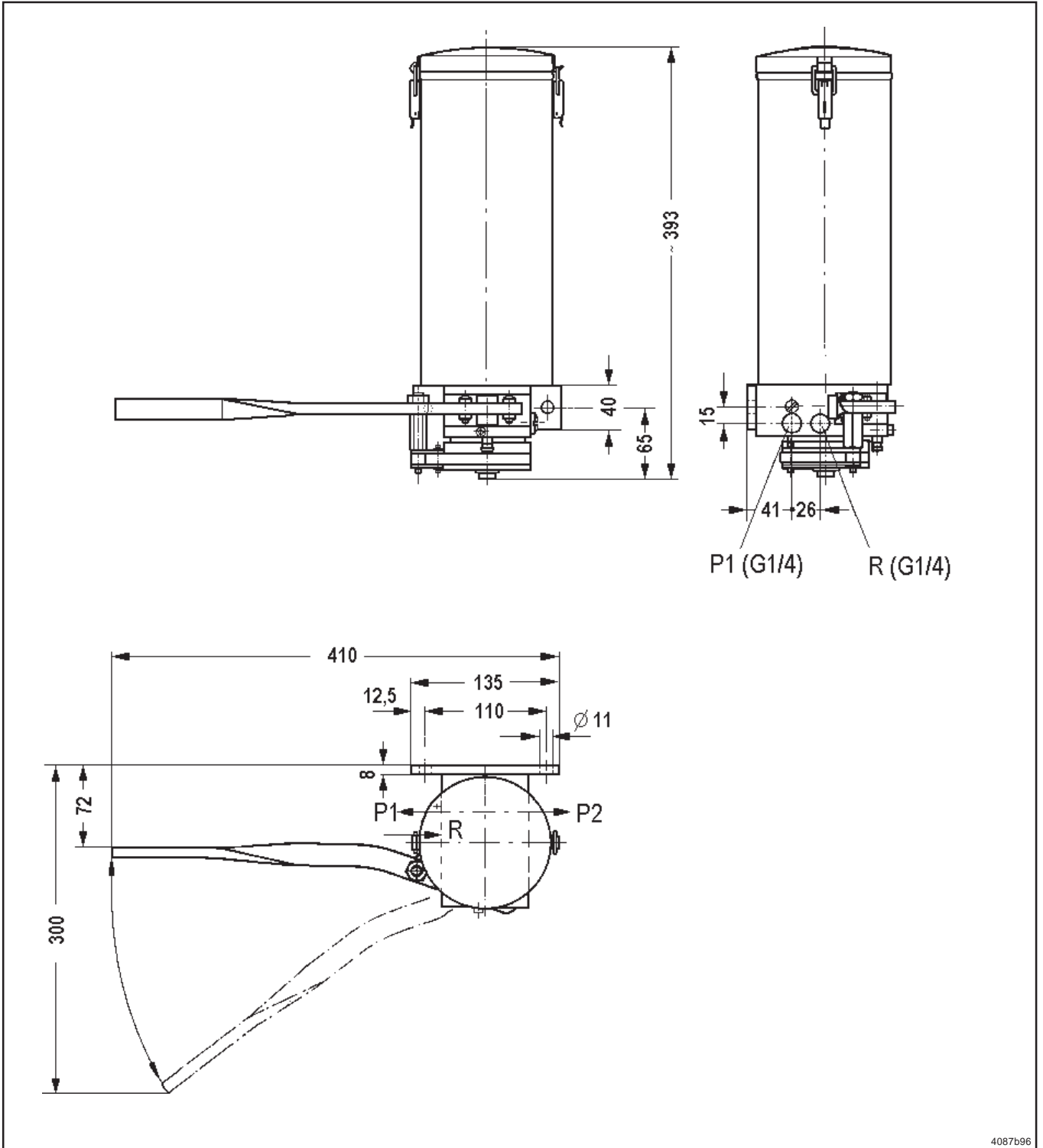
- Repairs may only be carried out by qualified, skilled personnel using original spare parts.
- Provided that the pump dispenses only clean lubricant, it does not need any particular maintenance. Clean and lubricate the drive parts (swivels) and the ratchet gear, if necessary.

**Troubleshooting**

<b>• Fault: Pump does not supply lubricant</b>	
<b>• Cause:</b>	<b>• Remedy:</b>
<ul style="list-style-type: none"> <li>• Reservoir empty</li> <li>• Suction borehole clogged</li> </ul>	<ul style="list-style-type: none"> <li>• Refill the reservoir with lubricant and cycle the pump until grease is dispensed from the pressure line connection without air bubbles.</li> <li>• Check the suction boreholes for foreign particles and remove them, if any.</li> </ul>
<b>• Fault: No pressurization in the system</b>	
<b>• Cause:</b>	<b>• Remedy:</b>
<ul style="list-style-type: none"> <li>• Check valve defective or clogged</li> <li>• Pump piston worn</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the check valve</li> <li>• Replace the pump housing assy (item 27)</li> </ul>
<b>• Fault: System blocked</b>	
<b>• Cause:</b>	<b>• Remedy:</b>
<ul style="list-style-type: none"> <li>• Bearing, lines or progressive metering devices clogged.</li> <li>• Change-over valve malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>• Find out the cause of the blockage and eliminate to it: see: progressive metering device malfunctioning</li> <li>• see: change-over valve malfunctioning or description of system</li> </ul>

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Dimensioned Drawing HJ2L (HJ2R mirror-image)

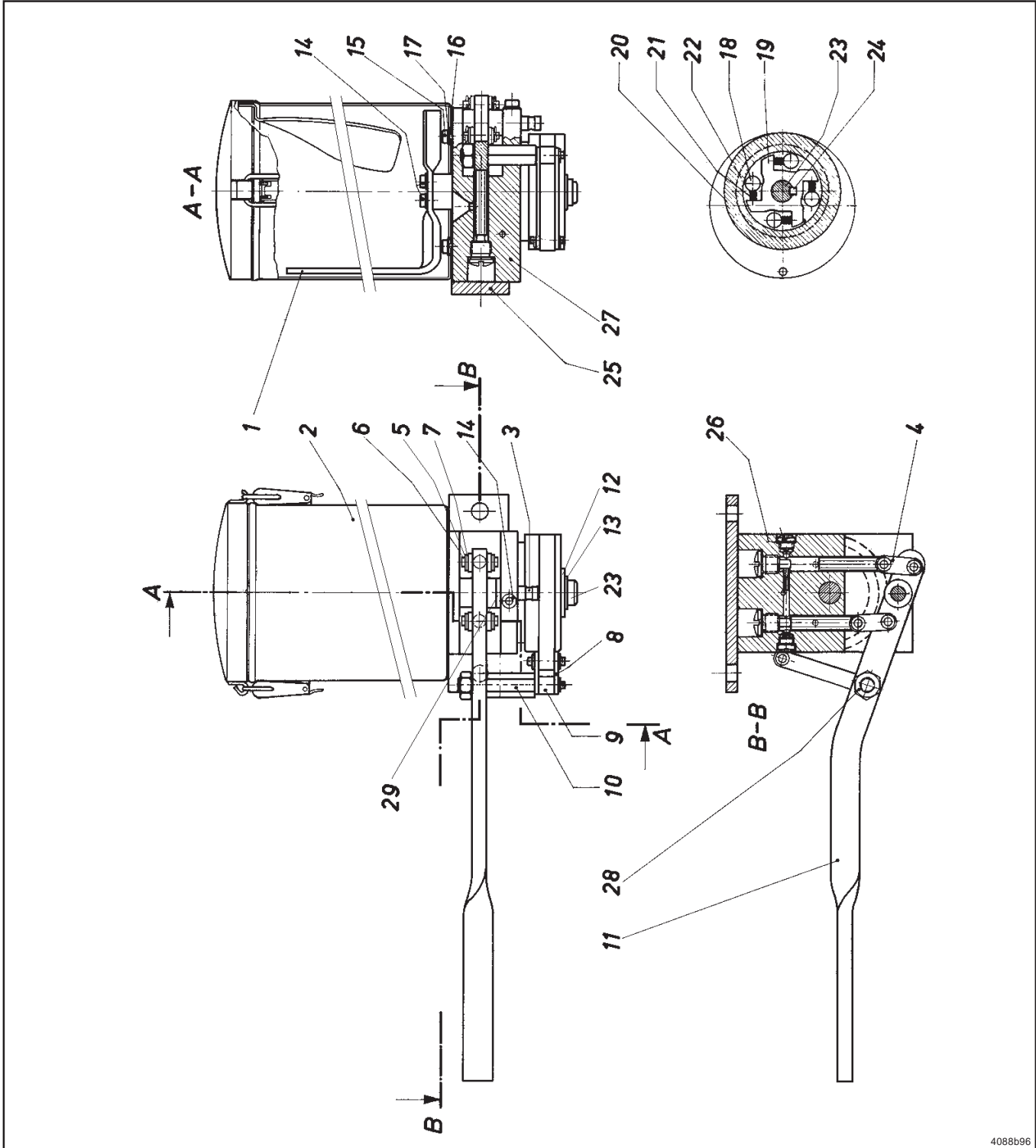


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- P1: Pressure connection for all types
- P2: Pressure connection for HJ2A
- R: Return line connection for HJ2

Spare Parts Drawing



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**Spare Part List**

<b>Item.</b>	<b>Designation</b>	<b>Qty.</b>	<b>Part. no.</b>
1	Stirring paddle	1	403-20180-1
2	Reservoir 3 dm <sup>3</sup>	1	503-30034-1
3	Bearing pin 10x59	1	403-20172-1
4	Side bar, short 32x12x3	4	403-20171-1
5	Washer Ø 5,3	11	209-13077-3
6	Pin without head Ø4,9x25	5	302-17366-2
7	Retaining washer	11	211-12504-1
8	Side bar, long 73x12x3	2	403-20175-1
9	Spacer sleeve 12x9,8	1	403-20176-1
10	Stud bolt	1	403-20177-1
11	Drive lever	1	403-20169-1
12	Washer B 15,0	1	209-13077-8
13	Retaining washer A15x1	1	211-12164-4
14	Hex. socket head screw M 5x12	3	201-12016-4
15	Hex. socket head screw M 5x8	6	201-12017-6
16	Sealing ring Ø 67 x Ø 83 x 1	1	306-17846-1
17	Tooth lock washer I 5,3	8	210-12161-9
18	Cylinder roller	8	405-24314-1
19	Ratched wheel	1	403-20086-1
20	Drive ring	1	403-20174-1
21	Compression ring 6,4x1x11	8	300-17203-1
22	Brake drum	1	403-20190-1
23	Shaft	1	403-20178-1
24	Feather key 5x5x20	1	214-12174-2
25	Flange	1	403-20168-1
26	Sealing ring Ø 10 x Ø 12 x 1	1	306-18752-1
27	Pump housing assy. HJ2, 1 outlet	1	503-30181-1
	Pump housing assy. HJ2A, 2 outlets		503-30182-1
28	Hexagon screw M 10	1	207-12136-1
29	Washer 10,0	1	209-12150-3