

Add-on Set with Pipelessly Installed Solenoid Valve 6DR 4004-1B

1. Purpose

The add-on set serves for the attachment of position controllers SIPART PS 2 Type 6DR400x-xx to NAMUR thrust drives. A solenoid valve with an extended NAMUR connection area can be attached pipelessly at the actuating pressure output of the position controller (Fig. 1) with the aid of which the actuating drive drives to the safe end position controlled by a separate signal X.

The following types of solenoid valves are recommended :

Herion	Type 2401009 and Type 2401109
Seitz	Type UV 0532 UPD

Figure 2 shows the dimensions of the attached position controller with solenoid valve

2. Assembly

2.1 Scope of Delivery

The scope of delivery contains :

Ser. No.	Quant.	Name	Note
1	1	Solenoid valve block	Standardised mounting plate according to IEC 534 for drives with rib, pillars or level surface as well as for solenoid valve with extended NAMUR connection area
2	1	Tapping bracket	Guides the roller with carrier pin and turns the lever arm
3	2	Clamp	Mounting tapping bracket at drive spindle
4	1	Carrier pin	Mounting with roller (5) to lever (6)
5	1	Roller	Mounting with carrier pin (4) to lever (6)
6	1	Lever NAMUR	For stroke range 3 mm to 35 mm For stroke ranges > 35 mm to 130 mm, use lever 6DR4004-8L.
7	2	U-bolt	Only for drives with pillars
8	4	Hexagon head screw	M8 × 20 DIN 933 - A2
9	2	Cylinder head screw	M8 × 20 DIN 912 - A2
10	6	Spring washer	A8 - DIN 127 - A2
11	4	U-washer	B 8.4 - DIN 125 - A2
12	2	U-washer	A 6.4 - DIN 125 - A2
13	1	Spring	VD-115E 0,70×11,3×32,7×3,5
14	1	Spring washer	A6 - DIN 137A - A2
15	1	Lock washer	3.2 - DIN 6799 - A2, mounted on the carrier pin
16	3	Spring washer	A6 - DIN 127 - A2
17	3	Cylinder head screw	M6 × 25 DIN 7984 - A2
18	1	Hexagon nut	M6 - DIN 439 - A4
19	1	Square nut	M6 - DIN 557 - A4
20	1	Cylinder head screw	M5 × 6 - DIN 85 - A2
21	4	Hexagon nut	M8 - DIN 934 - A4
22	1	Guide washer	6.2×9.9×15×3.5
23	1	O-ring	5.5 × 1.5
24	1	O-ring	13 x 2.5
25	1	Silencer	G 1/4
26	1	Locking screw	G 1/4
27	1	Wrench 13	DIN 659

The scope of delivery does not include the solenoid valve and its assembly accessories.

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2.2 Assembly Procedure (see figures 3.1 to 3.5)

- Assemble clamps (3) with cylinder head screws (17) and spring washers (16) on the drive spindle.
- Push the tapping bracket (2) into the countersinks of the clamps. Set the required length and tighten the screws so that the tapping bracket can still be moved.
- Push the roller (5), spring (13) and guide washer (22) onto the carrier pin (4).
- Push the carrier pin (4) into the NAMUR (6) lever and assemble with the U-washer (12), spring washer (14) and hexagon nut (18). The stroke range value specified on the drive or, if this is not available as a scaling value, the next highest scaling value is set. The centre of the pin must be at the scaling value. The same value must be set later under 1.YWAY during commissioning.
- Assemble cylinder head screw (17), spring washer (16), U-washer (12) and hexagon nut (19) on the lever.
- Push the pre-assembled lever in as far as the stop on the position controller axle and fix with the cylinder head screw (17).
- Remove the locking screw and O-ring from the air transfer opening (A) of the position controller.
- Select the row of holes for fixing the position controller to the solenoid valve block (1). The choice of the row of holes depends on the width of the drive lantern. The roller (5) should reach into the tapping bracket (2) near to the spindle but should not touch the clamps. Depending on the choice of the row of holes, one of the two air transfer openings (B) of the solenoid valve block is used for the air transfer from the position controller. Lock the unused air transfer opening with the O-ring (23) and cylinder head screw (20). Insert the O-ring (24) in the countersink of the used air transfer opening. Mount the solenoid valve block (1) with cylinder head screws (9) and spring washers (10) on the back of the position controller and align it.
- Hold the solenoid valve block with position controller against the drive lantern. Set the tapping bracket (2) so that the roller (5) is guided inside the tapping bracket. Fix the tapping bracket with the cylinder head screws (17).
- Prepare the assembly parts according to the drive type :
 - Drive with rib : one hexagon head screw (8), U-washer (11), spring washer (10)
 - Drive with level surface : four hexagon head screws (8), U-washers (11), spring washers (10) each
 - Drive with pillars : two U-bolts (7), four hexagon nuts (21), U-washers (11), spring washers (10), wrench (27) each
- Fix the solenoid valve block with the position controller to the drive lantern with the prepared assembly parts.
- Close the actuating pressure connection Y1 on the position controller with the locking screw (26).
- Connect the actuating pressure connection C on the solenoid valve block with the actuating pressure input of the drive.
- Attach the solenoid valve D with the enclosed sealing elements and assembly parts to the solenoid valve block.
- Screw the silencer (25) into the exhaust air connection (connection 3) of the solenoid valve. Close the outside connections 1 and 2 of the solenoid valve with the locking screws delivered with the solenoid valve.

3. Commissioning

Commissioning is effected according to the assembly and installation instructions of the position controller
SIPART PS 2.

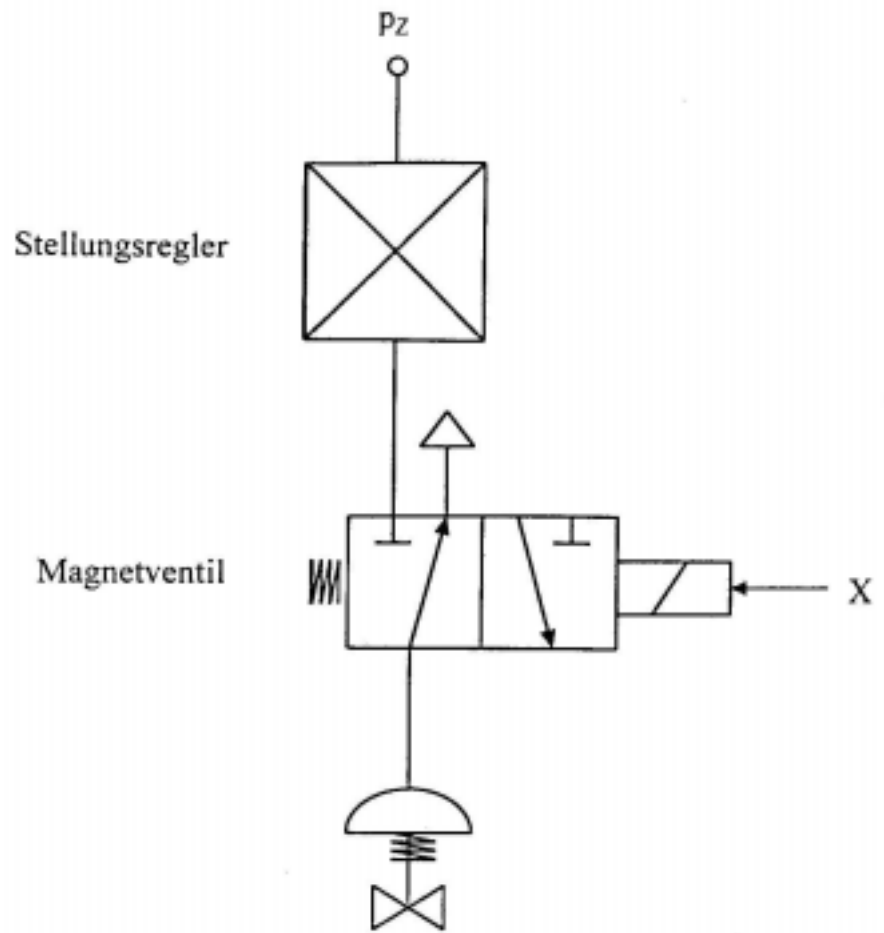


Bild 1 Blockschaltbild

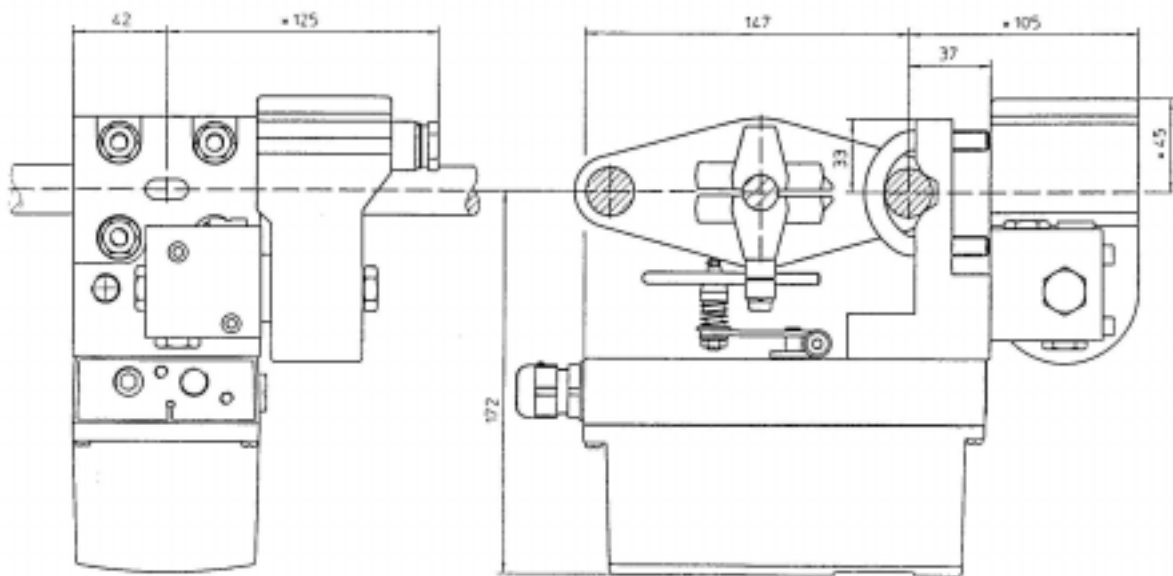


Bild 2 Abmessungen
 * Maße hängen vom verwendeten Magnetventil ab

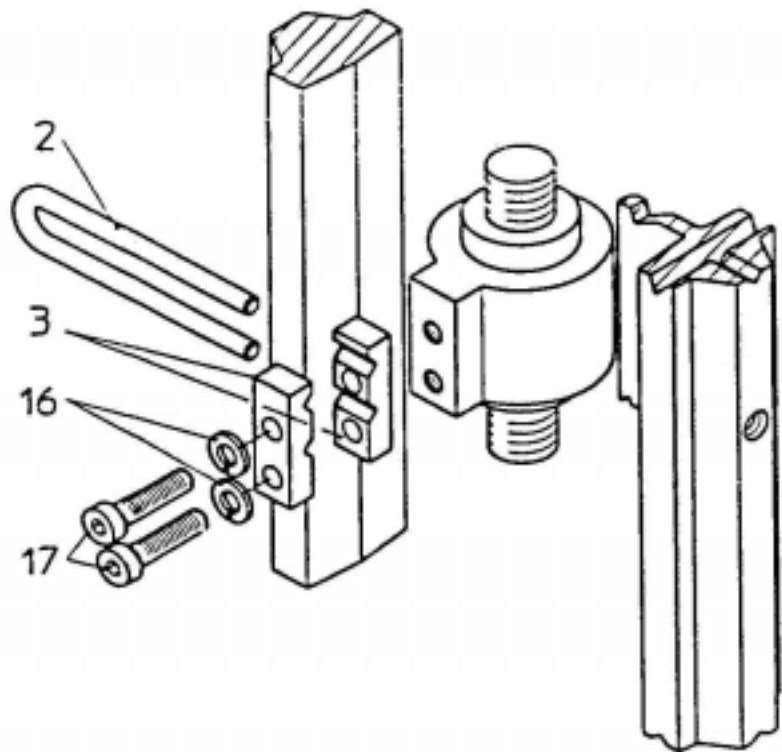


Bild 3.1

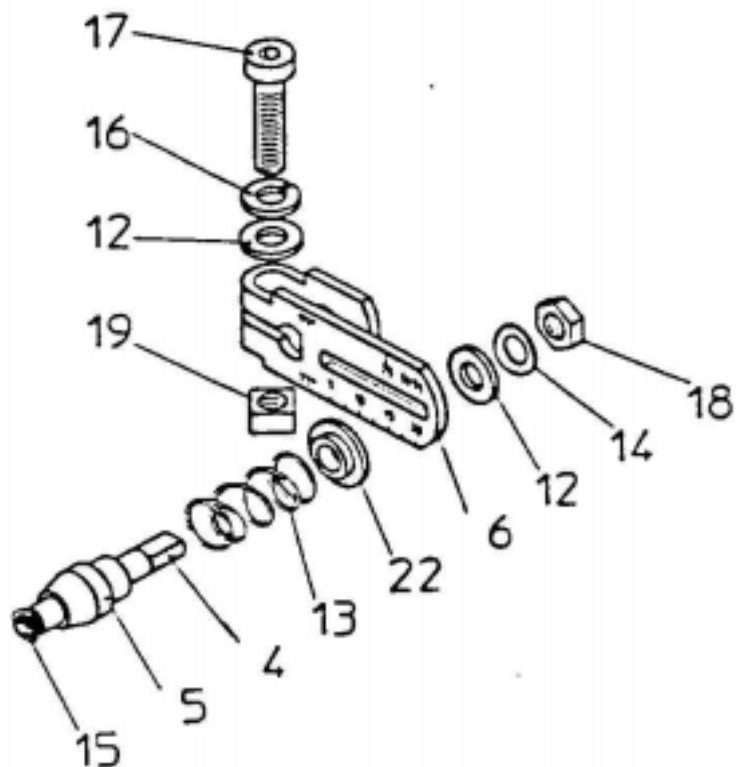


Bild 3.2

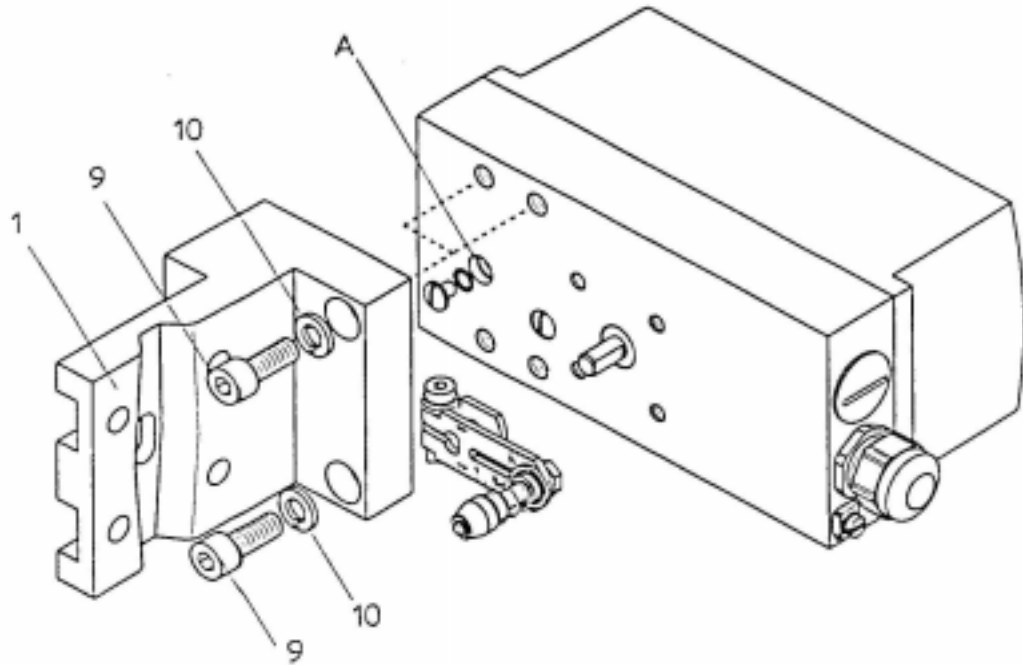


Bild 3.3

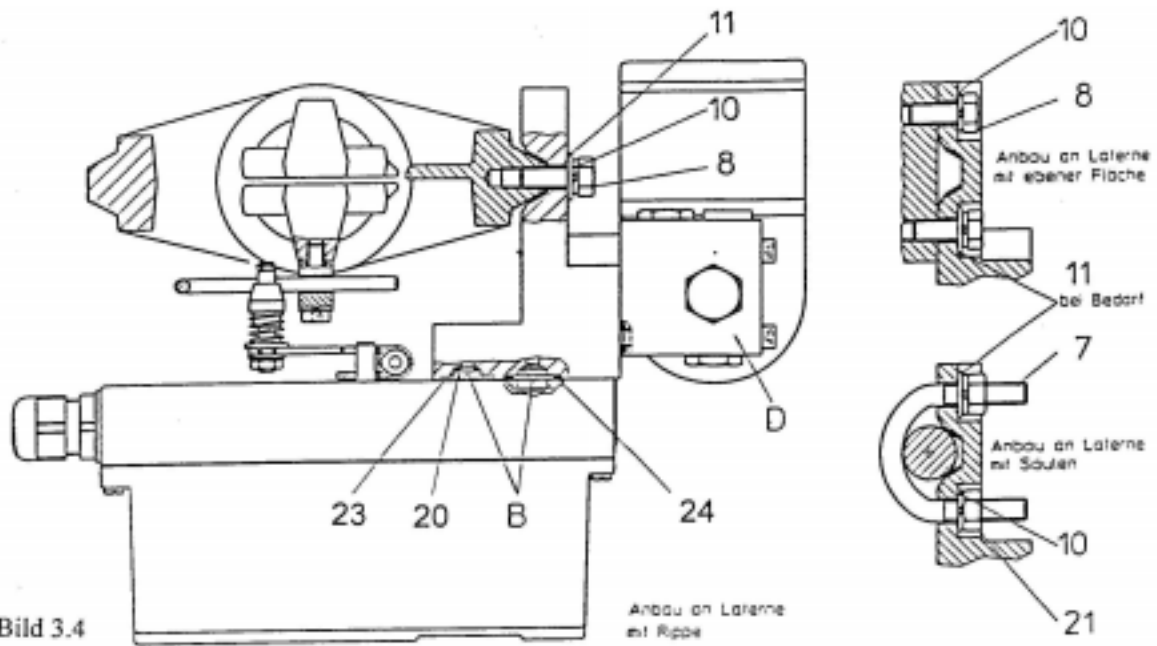


Bild 3.4

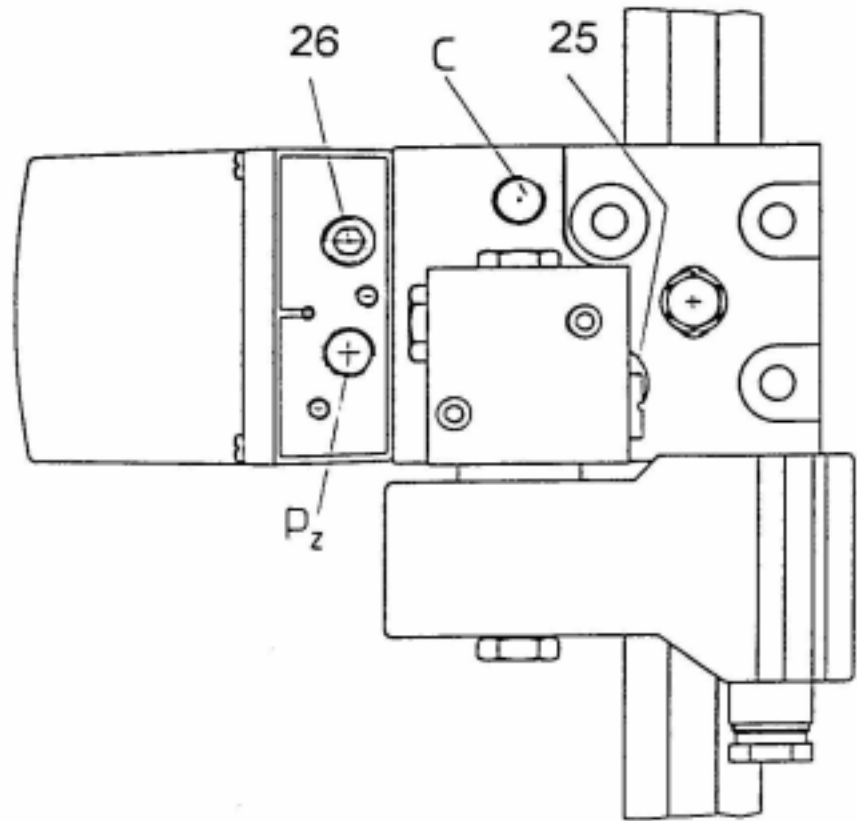


Bild 3.5