



Power Unit C-UDA

Compact Line

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Contents		Page
0	General	4
	0.1 Target group	4
	0.2 Supplementary documents	4
1	Product description	5
	1.1 General view	5
	1.2 Packing / delivery	6
	1.3 Hydraulic oil	6
2	Safety information	7
3	Installation and commissioning	8
	3.1 Assembly steps	8
	3.2 Hydraulic installation	13
	3.2.1 Bringing into machine room / Positioning	13
	3.2.2 Orientation of the ball-valve outlet	13
	3.2.3 Fitting the hose or pipe	14
	3.3 Electrical installation	15
	3.3.1 Motor connections 3-phase	15
	3.3.2 Motor connections 1-phase	15
	3.3.3 Incorporating the NTA-2 power supply in the lift control system	16
	3.3.4 Connecting the electrical components	16
	3.4 Valve settings	16
	3.5 Commissioning the system	17

0 General

This guide is an integral part of the product. It describes the product's safe use in all phases of operation and is valid for all model series that are referred to.

0.1 Target group

- Operator
- Installer
- Service engineer
- Repair technician

0.2 Supplementary documents

Document	Reference No.
Quick-start guide for valve	300-P-9010169
Installation and commissioning guide, C-LRV	300-I-9010212
Cooler connection set	300-A-9010217
Hand pump	300-A-9010218

1 Product description

1.1 General view



1	Valve
2	Power supply unit
3	DELCON
4	Solenoid, feedback, and pressure-switch cables
5	Return hose
6	Stub pipe/hose clip
7	Hand pump
8	Pressure switch
9	Oil dipstick
10	Ball valve
11	Fittings
12	Supply hose

1.2 Packing / delivery

Important: take note of all hazard warnings relating to transportation and handling.

Before dispatch, the valve is set to the operating parameters, and then packed in the power unit:

- Power unit is placed on a pallet
- Power unit is completely shrink-wrapped with plastic
- Packaging is marked with customer order number and Bucher "Kommission" number (sales order number)

Important: do not remove packaging until the power unit has been brought into the machine room.





- Delivery note is in a plastic envelope attached to the outside of the shipment
- Operating manual is inside the packaging

1.3 Hydraulic oil

Please refer to our document "Hydraulic Oils for Lift Control Valves" (300-P-9010073).




2 Safety information

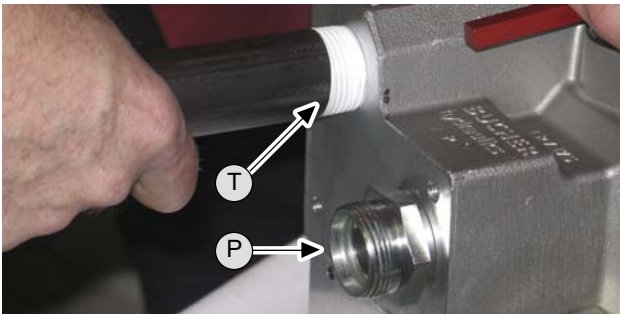





It is essential to take note of the important safety information contained in this document (guide).

	<p style="text-align: center;">Important</p> <p>Denotes a potentially harmful situation. If it is not prevented, the product or its surroundings may be damaged.</p>
	<p style="text-align: center;">Caution</p> <p>Denotes a potentially dangerous situation. If it is not prevented, it may result in slight or minor injuries to people.</p>
	<p style="text-align: center;">Warning</p> <p>Denotes a potentially dangerous situation. If it is not prevented, it may result in death or serious injuries to people.</p>
	<p style="text-align: center;">Danger</p> <p>This denotes a directly imminent danger. If it is not attended to, it will result in death or serious injuries to people.</p>

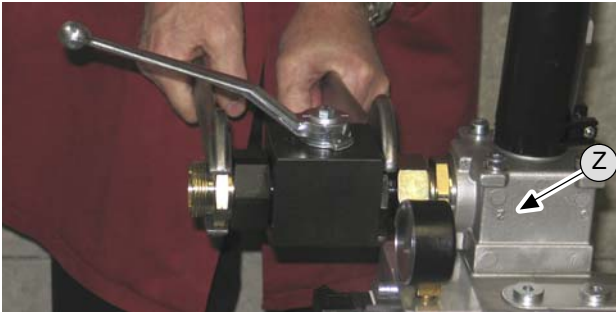
3 Installation and commissioning

3.1 Assembly steps

	Assembly step
	<ol style="list-style-type: none"> 1. Power unit as delivered 2. Transport the power unit - still in its packaging - into the machine room 3. Remove the packaging
	<ol style="list-style-type: none"> 4. Carry the power unit to the required position <ul style="list-style-type: none"> ▮ notice the carrying handles
	<ol style="list-style-type: none"> 5. Accessories displayed <p>Tools required:</p> <ul style="list-style-type: none"> • Open-ended spanners, 7, 14 and 27 A/F • 2 x OE spanners, 41 A/F • OE spanner, 46 A/F • Allen keys, 4 mm, 6 mm • Cross-point screwdrivers, sizes 2 and 3 • Screwdriver, size 1 (0.5x3.5) • Screwdriver, size 4 (1x6.5) • Screwdriver, size 2 (0.6x4)

	Assembly step
	<p>6. Apply Teflon tape (or similar sealing material) to the threads of the stub pipe</p> <hr/> <p>7. Screw the stub pipe into the T-port and tighten it</p> <hr/> <p>8. Screw the GE G1A fitting into the P-port and tighten it</p> <ul style="list-style-type: none"> with a 41 A/F open-ended spanner
	<p>9. Place the valve on the pressure pipe</p> <hr/> <p>10. Screw on the coupling nut and tighten it</p> <ul style="list-style-type: none"> with a 41 A/F open-ended spanner
	<p>11. Push the return hose over the pipe stub until it is 10 mm from the valve</p> <hr/> <p>12. Secure it with the hose clip</p> <ul style="list-style-type: none"> with a 7 A/F open-ended spanner
	<p>13. Fit the left- and right-hand covers</p> <ul style="list-style-type: none"> with a size 3 cross-point screwdriver
	<p>14. If necessary, rotate the hose outlet</p> <div style="display: flex; align-items: center;">  <p>Attention: When orienting the ball-valve outlet, never lift up the head of the valve. ⇒ Page 13, Section 3.2.2</p> </div>

Assembly step

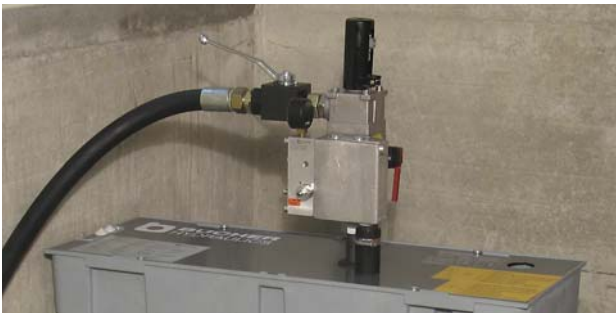


15. Screw the EVGE G1A fitting into the Z-port and tighten it

- | with a 41 A/F open-ended spanner

16. Screw in the ball valve and tighten it

- | with a 41 A/F open-ended spanner; hold it steady with a 46 A/F

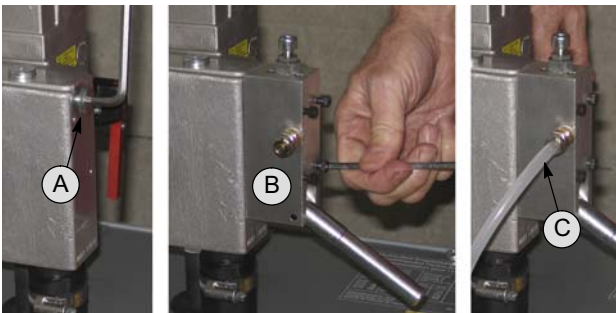


17. Screw the GE G1A fitting into the ball valve and tighten it

- | with a 41 A/F open-ended spanner

18. Screw on the hose fitting and tighten it

- | with a 41 A/F open-ended spanner



19. Remove the plug (A)

- | with a 6 mm Allen key

20. Fit the hand pump (B)

- | fit the O-ring seal
- | with a 4 mm Allen key
- tightening torque 5.9 Nm
- | Further information ⇒ data sheet 300-A-9010218

21. Attach the suction hose (C) to the hand pump and run it into the tank

- | with a 14 A/F open-ended spanner



22. Remove the plug

- | with a 6 mm Allen key

23. Fit the seal

24. Screw in the pressure switch and tighten it

- | with a 27 A/F open-ended spanner

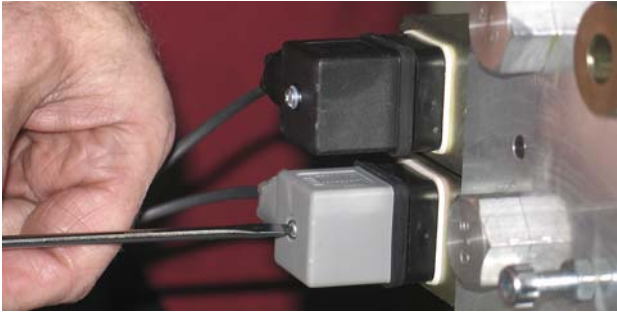
25. Slide the pressure switch cover onto the cable

26. Connect the pressure switch cable

- | with a size 1 screwdriver

27. Screw on the pressure switch cover

- | with a size 4 screwdriver

Assembly step

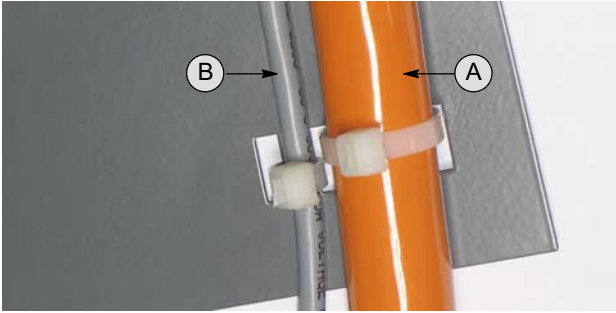
28. Fit the solenoid plugs (note the plug colours)
| with a size 1 screwdriver



29. Fit the feedback cable
| with a size 1 screwdriver



30. Remove the junction box cover
| with a size 2 cross-point screwdriver
31. Connect the motor cables
| with a size 1 screwdriver

Assembly step

32. Strain relief of cable for motor (**A**) and PTC thermistor cable (**B**)

- | Fix with cable tie in the slits provided.

33. Refit the junction box cover

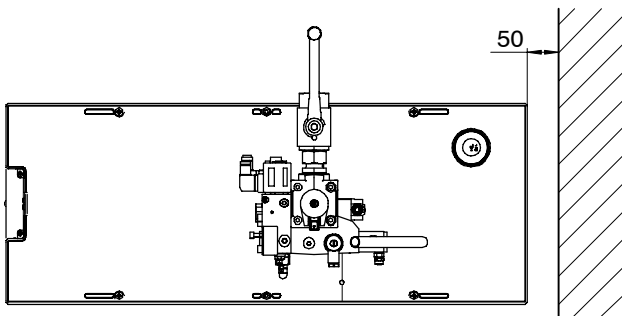
- | with a size 2 cross-point screwdriver



34. Initial assembly is now finished

3.2 Hydraulic installation

3.2.1 Bringing into machine room / Positioning



Important: Do not bang the power unit against walls. This could damage the tank.

Important: 50 mm wall clearance will ensure optimum heat radiation.

3.2.2 Orientation of the ball-valve outlet

As standard, the ball-valve outlet is rear-facing (code H)
It can be altered to left (L) or right (R) as follows:

Important: the ball-valve outlet must not be turned to a new position unless the hose is first disconnected.

Reorienting the ball-valve outlet

1. Unscrew cap screws on head of valve
 - | with a 6 mm Allen key
2. Remove the screws
3. Turn head of valve to desired ball-valve position



Caution

Risk of damage to the flow-rate measuring system

When orienting the ball-valve outlet, **never** lift up the head of the valve.

4. Insert the cap screws and tighten them.
 - | Tightening torque for

C-LRV 175	= 25 Nm
C-LRV 350	= 50 Nm
C-LRV 700	= 80 Nm
5. Check the mechanical null point
 - | Readjustment may be necessary ⇒ see document "Instructions de montage/mise en service C-LRV" 300-I-9010212

The ball-valve outlet is now correctly oriented

3.2.3 Fitting the hose or pipe



Caution

Contamination in the line

Contamination adversely affects the valve's function. This can cause a dangerous system condition.

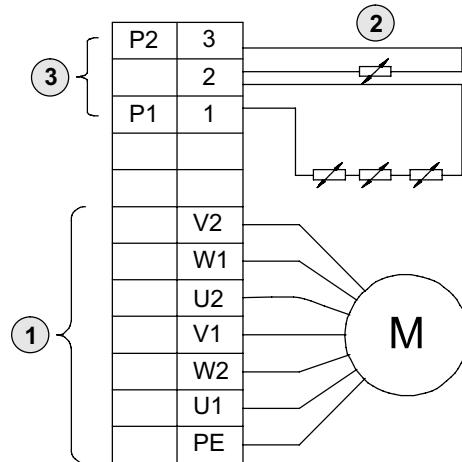
Preventive measures:

- Clean the hose or pipe before fitting it
- Leave sealing caps/plugs in place until assembly
- Check that all fittings are assembled correctly

3.3 Electrical installation

3.3.1 Motor connections 3-phase

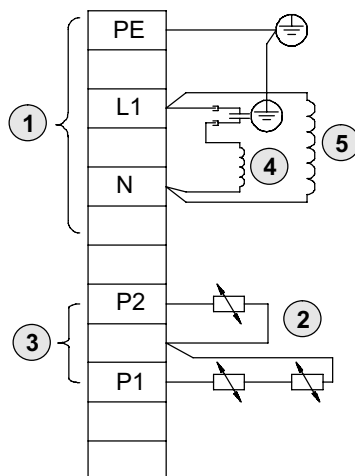
Important: Use a phase tester to check the correct phasing in accordance with the wiring diagram.



1	Cable connection to controller (6 x L/PE/thermistor)	2	Thermistor
3	max. testing voltage 2.5 VDC		

3.3.2 Motor connections 1-phase

Important: Note the direction of rotation (arrow on pump flange)



1	Cable connection to controller (L/N/PE)	4	Auxiliary winding
2	Thermistor	5	Main winding
3	max. testing voltage 2.5 VDC		

3.3.3 Incorporating the NTA-2 power supply in the lift control system

- Power supply unit must be incorporated in the lift control system
- Command inputs K1 - K5 must be fed to the power supply
- The electronic card must be installed in the power supply
- The feedback cable must be connected to the power supply without any intermediate junctions or connections
- Safety relays R1 and R2 must be run separately for each valve and wired into the solenoid cables

3.3.4 Connecting the electrical components



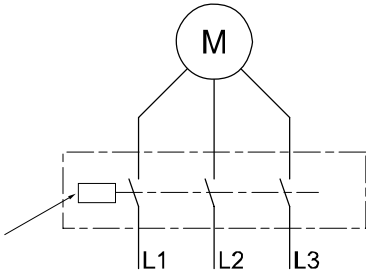


Additional information to connect following components, see "Installation and commissioning guide C-LRV" (300-I-9010212)

Component	additional documents
Power supply unit	---
Feedback cable	"Feedback Cable, Type IWK-1" 300-P-9010009
Solenoid cables	"Connecting Cable for UP/DOWN Solenoids" 300-A-9010007
Pressure switches	"Pressure Switch, Type DZ" 300-A-9010114
Deceleration switches in lift shaft	---
Cooler	"Cooler Connection Set" 300-A-9010217
Oil heater	"Oil Heating System for Series C-UDA 150" 300-P-9010224
Electrical emergency-lowering	---

3.4 Valve settings

See hydraulic commissioning of the valve C-LRV
 ⇒ document "Installation and startup guide" 300-I-9010212

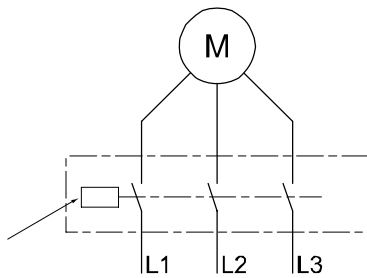
3.5 Commissioning the system

Work steps	
	<ol style="list-style-type: none"> 1. Remove the right-hand cover. 2. Check inside the tank for contamination and clean as necessary. <p>Important: ensure that no residues of cleaning materials are left in the tank</p>
	<ol style="list-style-type: none"> 3. Fill with hydraulic oil to 40 mm below the cover
	<ol style="list-style-type: none"> 4. Jog main lift control switch until pump primes and pressure builds up in the hydraulic system
	<ol style="list-style-type: none"> 5. Remove the UP solenoid plug (grey) on valve
	<ol style="list-style-type: none"> 6. Open the ball valve

Work steps



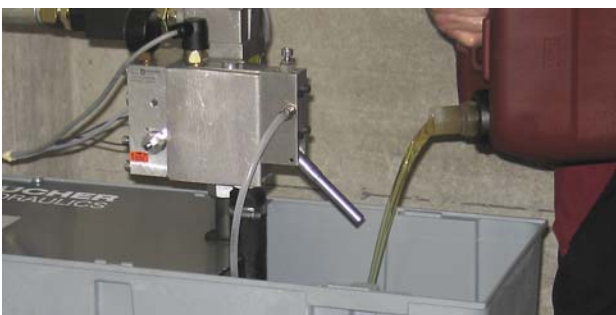
7. Unscrew air-bleed screw on cylinder head by one turn



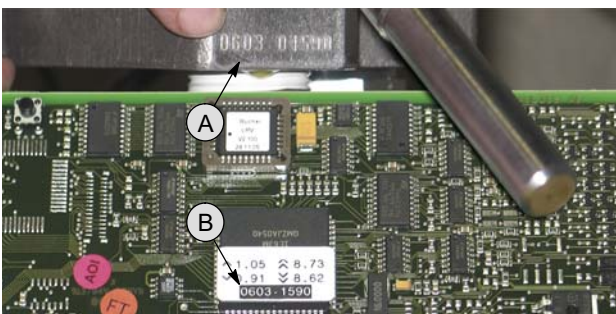
8. Start motor



9. Tighten the air-bleed screw when no more air is escaping



10. Top-up the oil in the tank to approx. 40 mm below the cover



11. Compare the serial numbers on the valve and the C-DELCON
 - | they must be the same!