

Operating instructions

Torque and Angle and Automatic Torque System (DW-PA)

Version 1.5.2

1. Operating elements

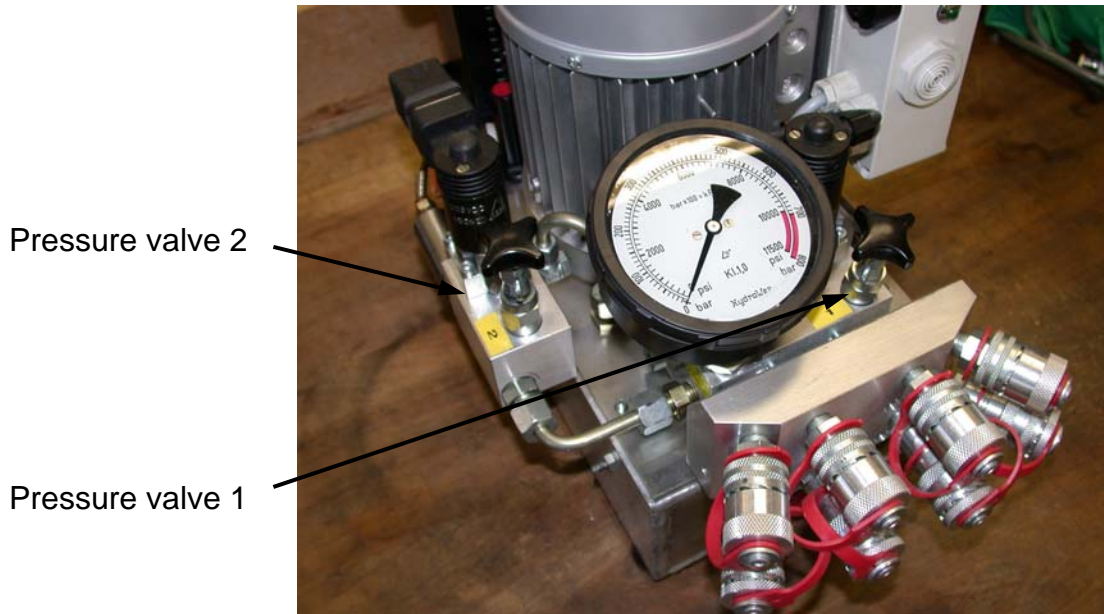


Figure 1

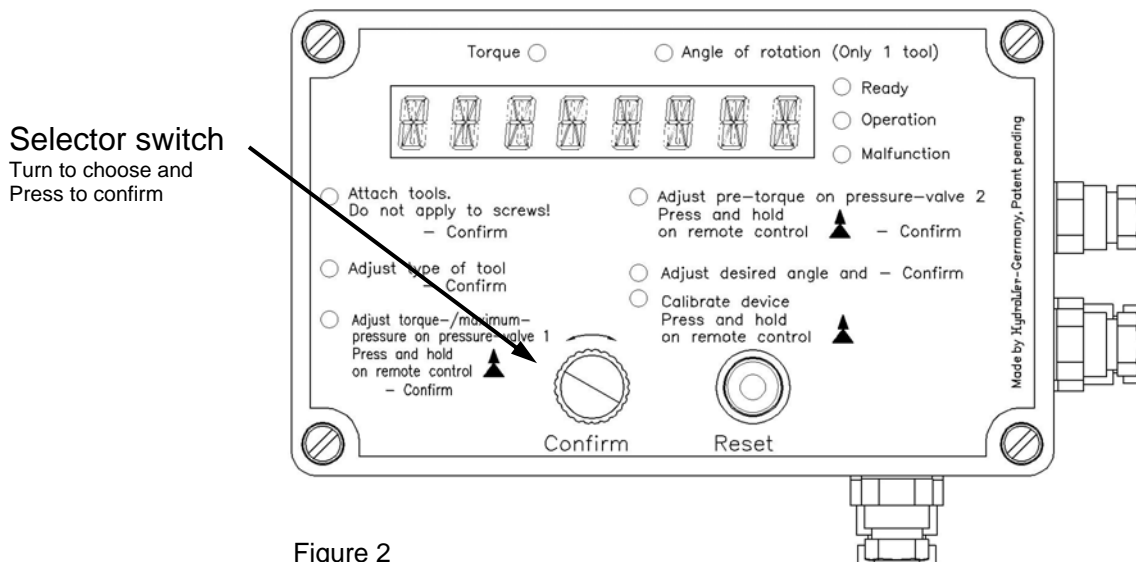


Figure 2

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2. Precautions

- Always make sure the system is vented properly. Air inside the hydraulic system may cause unexpected and unpredictable behaviour.
- Due to measurement requirements only use tools size 1 and up. DO NOT USE tools like P7 or P5.

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3. “Torque and Angle”

- Insert the power plug and switch on the device; green lamp (power supply unit) lights up
- Turn selector-switch and choose „ANGLE“.
To confirm press selector-switch afterwards.
- First red lamp on the control console begins to shine
- Attach the tool. (Only one tool!) **Do not apply the tools to the screws**
To vent the system operate tools several times back and forth in idle mode.
Press selector-switch to confirm.
- First red lamp goes out, second red lamp begins to shine
- To choose the tool-type turn selector-switch and press it to confirm your selection
- Second red lamp goes out, third red lamp begins to shine
- Press and hold the “Automatic”-button (▲) to adjust the maximum-pressure using pressure-valve 1. When pressure is set press selector-switch to confirm. Release the “Automatic”-button (▲) afterwards.
- Third red lamp goes out, fourth red lamp begins to shine
- Set pre-torque-pressure by pressing and holding the “Automatic”-button (▲). Adjust the pressure using pressure-valve 2. When pressure is set press selector-switch to confirm. Release the “Automatic”-button (▲) afterwards.
- Fourth red lamp goes out, fifth red lamp begins to shine
- Adjust swivel angle by turning the selector-switch. When the correct angle is selected press selector-switch to confirm.
- Fifth red lamp goes out, sixth red lamp begins to shine
- Press and hold the “Automatic”-button (▲) . The device will calibrate itself
- A beep and the green shining ”Ready“-lamp within the remote control indicates a successful calibration.
- Sixth Red lamp goes out, green lamp begins to shine; now the device is ready to operate
- Apply the tool to the screw
- Press the “Automatic”-button (▲) to start the driving operation.
The green lamp goes out, the yellow lamp indicates the operation. It runs fully automatical and will end as soon as the screw is driven up to the set angle.
The green lamp within the remote control and a beep will show up upon completion.
- **Now the device is ready for further driving operations**
- If the red lamp “Malfunction“ comes up, a malfunction occurred and a started driving operation was not finish succesfully.

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4. Power-Automatic

- Insert the Power Plug and switch on the device; green lamp (power supply unit) lights up
- Turn selector-switch and choose „TORQUE“.
To confirm press selector-switch afterwards.
- First red lamp on the control console begins to shine
- Attach the tool. (Only one tool!) **Do not apply the tools to the screws**
To vent the system operate tools several times back and forth in idle mode.
Press selector-switch to confirm.
- First red lamp goes out, fourth red lamp begins to shine
- Set torque-pressure by pressing and holding the “Automatic”-button (▲). Adjust the pressure using pressure-valve 1
- When pressure is set press “Confirm“; afterwards release the “Automatic”-button (▲)
- Fourth red lamp goes out, sixth red lamp begins to shine
- Press and hold the “Automatic”-button (▲) . The device will calibrate itself
- A beep and the green shining ”Ready“-lamp within the remote control indicates a successful calibration.
- Sixth Red lamp goes out, green lamp begins to shine; now the device is ready to operate
- Apply the tools to the screws
- Press the “Automatic”-button (▲) to start the driving operation.
The green lamp goes out, the yellow lamp indicates the operation. It runs fully automatical and will end as soon as all screws are driven up to the set torque.
The green lamp within the remote control and a beep will show up upon completion.
- **Now the device is ready for further driving operations**
- If the red lamp “Malfunction“ comes up, a malfunction occurred and a started driving operation was not finish succesfully.

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Resolving an error

An error indication (red lamp „malfunction“ within frontpanel, red lamp within remote control, error number shown in display) may occur during following circumstances:

- Error # 3: The leakage within the tool is too high. Replace or repair the tool.
- Error # 4: No tool has been recognized. Often this is caused by unsufficiently tightened couplings. Connect the tool correctly.
- Error # 7: The torque pressure reached during bolting differs significantly from the torque pressure set up. Check the pressure valve. Particularly have a look at the wingnut that secures the valve.
- Error # 8: During bolting in angle-mode the auto button has been released. The angle that has been set up can not be reached correctly.
- Error # 9: During bolting in angle-mode the set up maximum pressure has been reached. To protect the bolt from overload the pump stops further bolting. Please choose a lower angle or rise the allowed pressure.
- Error # 10: The tool used has an oil volume which is too low to secure a safe and proper reaching of the angle set up. Use a bigger tool.
- Error # 11: The pretightening pressure is set too low. For proper bolting use a pretightening pressure above 40 bar (570 psi).

Delete the error message by pressing „Reset“ and start from the beginning.

All boltings that were interrupted by an error were not finished completely and properly.