



Operation Instruction



Hydraulic Power Pack
X2P-Z ATEX
Explosion proof version

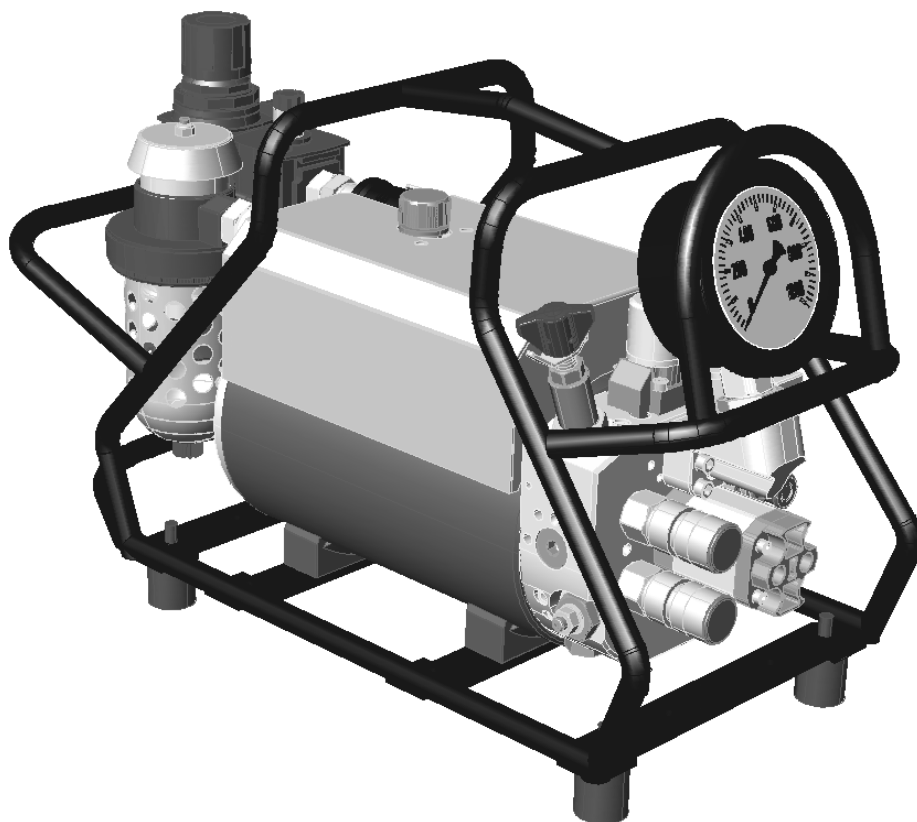


Table of Contents

1. References	3
1.1. CE Indication	3
1.2. General Reference	3
1.3. General Safety References	3
1.4. Symbols and Warnings	3
2. Product Information	4
2.1. Authorized Use	4
2.2. Unauthorized Use	4
2.3. Operation Instructions also valid	4
3. Scope of supply / Accessories	4
4. Technical Data	
5. Description of function	5
5.1. Putting into operation	5
5.1.1. Checking oil level	5
5.1.2. Filling with oil	5
5.2. Connectin power pack to air supply	5
5.3. Adjusting air pressure	6
5.3.1. Starting power pack	6
5.4. Filter-Lubricator-Regulator unit	7
5.4.1. Pressure reducer	7
5.4.2. Smoke screen lubricator	7
5.4.3. Filter muffler	7
6. Bolting	8
6.1. Pre-adjustments	8
6.2. Bolting job	8
7. Circuit diagramm	9

IMPORTANT INFORMATION

1. Reference

1.1. CE Indication

These products are marked with the CE-Indication which assures that they meet with the safety requirements of the European Union.

1.2. General Indication

Before starting to use the bolting equipment

...please refer to the instruction given in this manual. Authorities request us to supply you with all information crucial for your safety and that we advice you how to avoid damage of the equipment.

...all persons involved in the operation of the equipment have to carefully read the instructions in order to make them familiar with the use of the tools. That will protect you from injuries and will give you vital information about how to connect and how to use the tools and how to care for their safety.

...if you do not follow the instructions Maschinenfabrik Wagner will not be legally responsible for damages which can occur from negligent or intentional disobedience of the instructions.

- The operation instruction is part of the equipment. It has to be kept in the near of the equipment for immediate reference all-time. Exact compliance with the instructions is a precondition of authorized use and correct handling.
- Safety for the operator and trouble free operation of the equipment can be guaranteed only, if original component parts are used.
- If other than original component parts are used Maschinenfabrik Wagner can not guaranty for safe operation and function. All claims for compensation of damages which occur due to this reason are excluded.
 - Maschinenfabrik Wagner regards itself responsible for the equipment in view on safety, consistency and function only when assembly, new adjustments, changes, extensions and repairs are done by Maschinenfabrik Wagner or by someone authorized by Maschinenfabrik Wagner and if the equipment is used in compliance with the

1.3. General Safety References

- When operating the equipment laws and regulations valid in the place of application have to be observed. In the interest of a safe operation owner and operator are responsible for abeyance of all valid regulations.
- Before every application of the tool the operator has to assure safe function and proper condition of the equipment.
- The operator has to be familiar with the operation of the tool.
- Before starting the operation equipment and hoses have to be checked and examined for damages. Damaged hoses and couplers, etc. have to be replaced by proper ones immediately.
- During all repair and maintenance work the equipment has to be disconnected from air supply.

1.4. SYMBOLS AND WARNINGS



Please follow assembly and operation instructions



Warning! Special references



Special reference on explosion protection CE Indication

2. Product Information

2.1. Authorized Use

The hydraulic power pack is designed for application with PLARAD hydraulic bolting equipment for tightening and loosening of bolts.



2.2 Unauthorized use

The hydraulic power pack is designed for use in indoor as well as in outdoor areas and in ambient temperatures from -10 to +50°C. If in a special application these conditions are different, please contact manufacturer.

The power pack is suitable for operation from air supply as described under section 4 "Technical Data".

Different or exceeding use is regarded as unauthorized use. If damages occur from such unauthorized use, the manufacturer will not be responsible for them. The operator will have to bear the risk exclusively.

2.3. Operation instructions also valid

- Shell Tellus DO 32
- Wilkerson Installation & Service Instructions
- 83-538-000 Standard Regulator
- Wilkerson Installation & Service Instructions
- 83-531-000 Standard Filter
- Wilkerson Installation & Service Instructions
- 83-546-000 Lubricator
- Wilkerson Installation & Service Instructions
- 83-557-000 Muffler Reclassifier

3. Scope of supply / Accessories

PLARAD hydraulic power packs come oil filled and ready for use.

The following items belong to the scope of supply. Please order for them if they are additionally required.

Filter element 10µm K20-058-4-27901
 Hydraulic oil 1 liter K20-001-4-46701 Hydraulic
 oil 5 liter K20-001-4-46701
 Please state volume of oil when ordering!!!

4. TECHNICAL DATA

Max operation pressure	800 bar	
Flow volume	1.2 l/min	10 bar
	10 l/min	800 bar
Air pressure:	4 – 7 bar	
Air volume:	40 – 65 l/s	
Speed of air motor:	3000 rpm at 4 bar / 40 l/s	
Weight:	22kg	
Hydraulic oil:	Shell Tellus DO 32	

In case that different hydraulic oil is used its specification must meet the specification of hydraulic oil Shell Tellus DO32 given in this instruction.

5. Description of function

The hydraulic power pack creates hydraulic pressure. This pressure can be adjusted by means of the pressure setting valve and can be read from the pressure gauge. Via HP-hoses (advance and return) this pressure is supplied to the bolting tool. By means of a lever and ratchet system in the bolting tool the pressure is transferred into a rotating moment = torque.

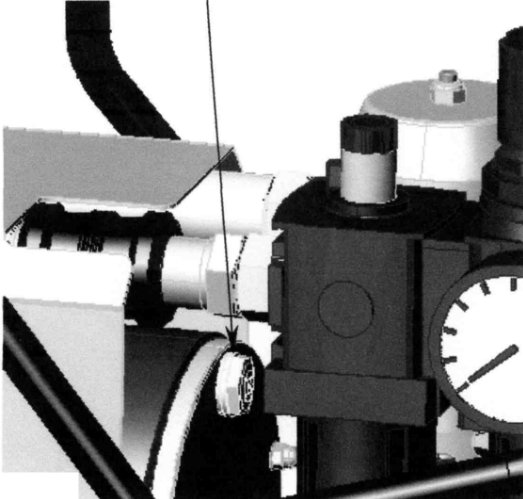
5.1. Putting into operation

5.1.1 Examination of oil level

Before every operation the oil level needs to be checked.

Checking the oil level and re-filling of hydraulic oil has to be executed outside of explosion hazardous area.

The oil level gauge must be filled to the half.



Oil level gauge



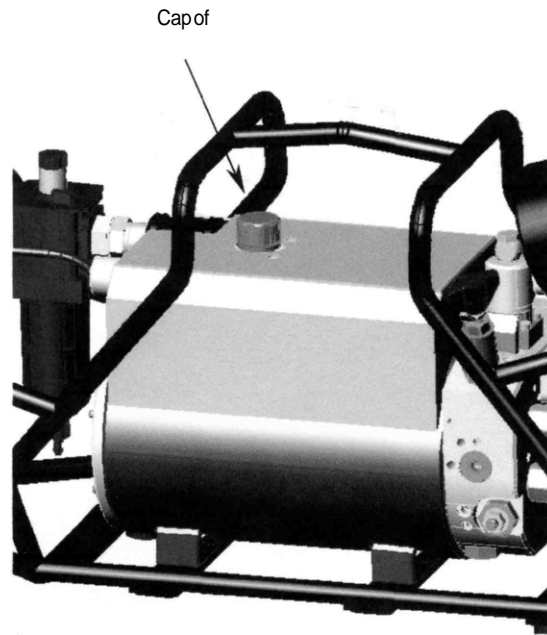
Warning!! When checking the oil level die power pack must be in horizontal position.



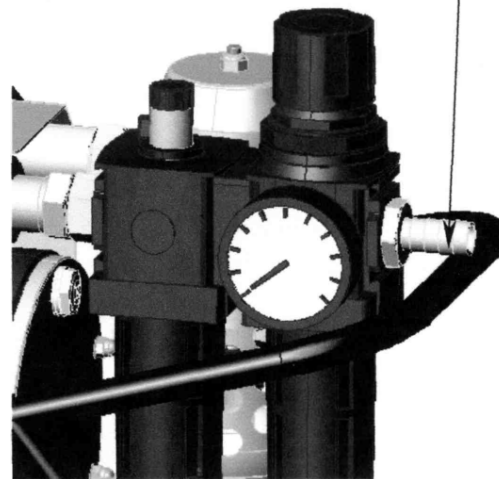
Checking the oil level is part of the explosion proof. Only when the required oil level is prevailing explosion proof safety is established. Maximum allowed angle of inclination of the power pack in operation is $\pm 15^\circ$.

Remove oil filler cap – Fill oil tank up to max level marking – Screw on filler cap hand tight again.

5.1.2. Filling with oil



5.2 Connection of air supply to power pack



Connector for air supply

The hose for air supply is suitable for locking, e.g. by a hose clip. It has to be made sure that the hose can not come off during operation.



Warning! Please observe data given on ID- plate.

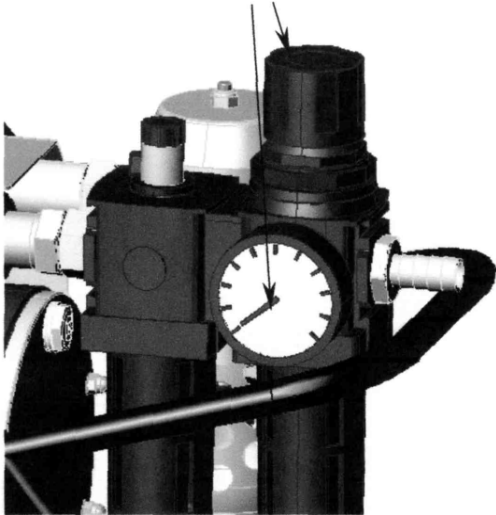


The power pack must be operated by compressed air only. It is of vital interest that the compressed air transferred to the power pack does not come from an explosion hazardous area. The supplied air must be created in a non-hazardous room or area

Please also refer to equally valid instruction for the lubricator attached to this operating manual.

5.3. Adjustment air supply

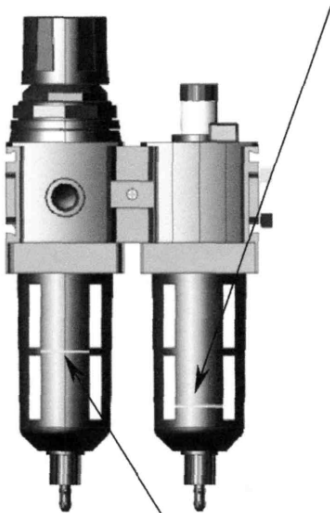
The air pressure is to be adjusted on the pressure regulator of the power pack to the maximum pressure of 6 bar. The flowing pressure (pressure during run of the air motor) must not exceed 4 bar.



Druckminderer



Warning! Please watch oil level in lubricator. If the min. level is reached, lubricant has to be added.



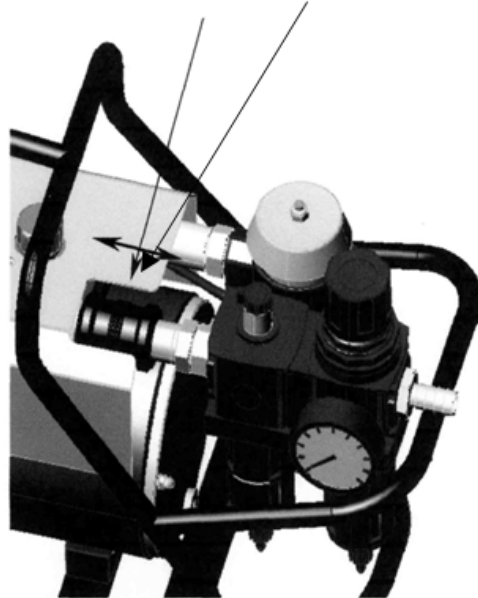
Warning! Please also check water level in the filter unit. If the "max level" is reached, the unit has to be drained from water. Please also refer to equally valid instruction for the filter attached to this operating manual.



Refilling of the oil in the lubricator and draining of water in the filter must be done outside of explosion hazardous rooms or areas only. Please also refer to equally valid instructions attached to this operating manual.

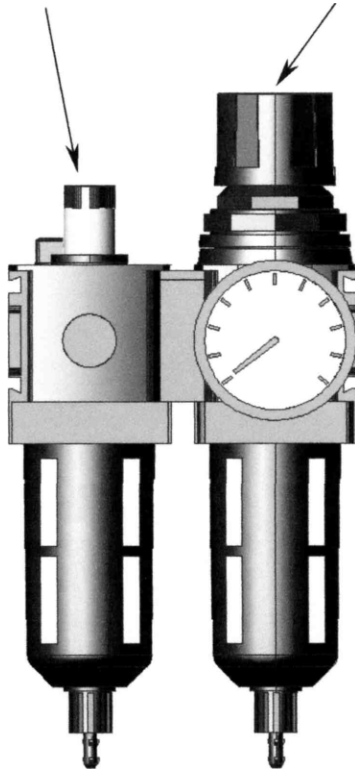
5.3.1. Switching on the power pack

The air supply to the power pack is to be opened by means of the slide valve.



5.4. Filter – Lubricator –Regulator unit

Smokescreen lubricator Pressure reducing valve



5.4.1. Pressure reducing valve

Slightly grease O - ring on sealing ferule now and again.. Before doing so shut off air supply and release from air pressure. Unscrew locking cap (knurled nut) and remove sealing ferule. Slightly apply some grease on O - ring. Before putting pressure on again release pressure regulator completely from pressure by screwing off the adjusting screw. Then turn in again the adjusting screw until the pressure gauge on the reducing valve indicates desired pressure.

For draining water from filter unscrew knurled nut under filter body by approx. 180°. After draining tighten knurled nut again.



Maintenance work on pressure reducer may be done outside of explosion hazardous rooms or areas only.

5.4.2. Smoke screen lubricator

Adjust oil volume of lubricator during operation according to requirement by means of the dosing screw. The number of drops can be watched through the inspection glass. For filling with oil unscrew lock nut. Fill up to marking and close lock nut again. Refilling of the oil can be done during operation. Air supply needs not to be shut-off.



Refilling of oil in splash lubricator must only be done outside of explosion hazardous rooms or areas.

The amount of 1 mm³ oil per 1 m³ compressed air is sufficient to insure low wear and to assure optimum rotation and power of the pneumatic motor.

The lubricator is to be adjusted to approx. one drop per minute.

Recommended oil:

VIA	Avilup RSL 46
BP	Energol HPS 46
ESSO	NutoH
TEXACO	Rando Oil HDC 38
WILKERSON	Airline Oil F442001

5.5. Filter muffler

Drain water of condensation regularly. Clean filter when foul. For this unscrew drain plug, remove body, unscrew lock nut of filter and remove filter material. Lay and swing filter material in a solvent. Then dry and reassemble it again. Please assure proper sealing.





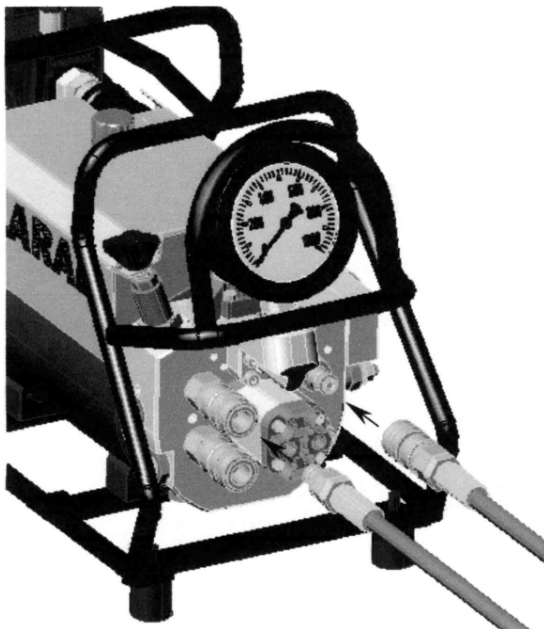
Trichlorethylene (or simply Tri)

Trichlorethylene is a FCKW. Because of its toxic and carcinogenic properties as well as the environmental polluting effects FCKW is not allowed to be used anymore. (FCKW-Halon prohibition regulation) Because of its toxic properties the use as a solvent is allowed for research purpose only!

6. Bolting

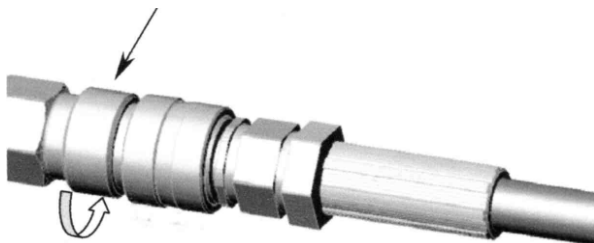
6.1. Pre-adjustments

- Connection of air supply to pump
- Adjustment of pressure reducer
- Connection of HP-hoses to power pack and to hydraulic torque wrench



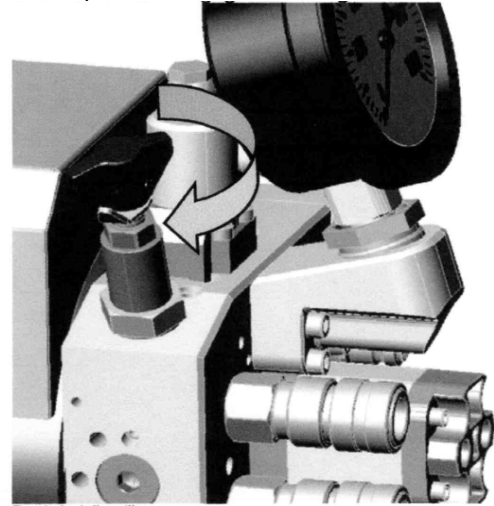
Connection of hydraulic hoses

Take care for proper snapping of the couplers! Lock couplers to avoid unintentional loosening. Tighten lock ring.



Make sure that hoses are not kinked, twisted or jammed somewhere. Switch on pump by actuating the slide valve.

Push button on remote control and keep it depressed until pressure setting is completed. Adjust hydraulic pressure required for a desired torque by turning the pressure setting valve on the pump. Read pressure on the gauge of the pump. If there is no torque scaling on the gauge the pressure for the desired torque has to be read from the attached torque chart valid for the specific torque wrench.



Druckeinstellventil



Warning! Please check, if a valid performance chart for your torque wrench is available. The serial number of your tool is indicated on the performance chart and on the technical data sheet „performance chart“. If in doubt, please contact technical department of manufacturer.



Warning! When setting the pressure it has to be made sure that the maximum torque allowed for your tool plus accessories can not be exceeded. The maximum torque is written on the tool and on the accessories.

Now the bolting equipment is ready for use.

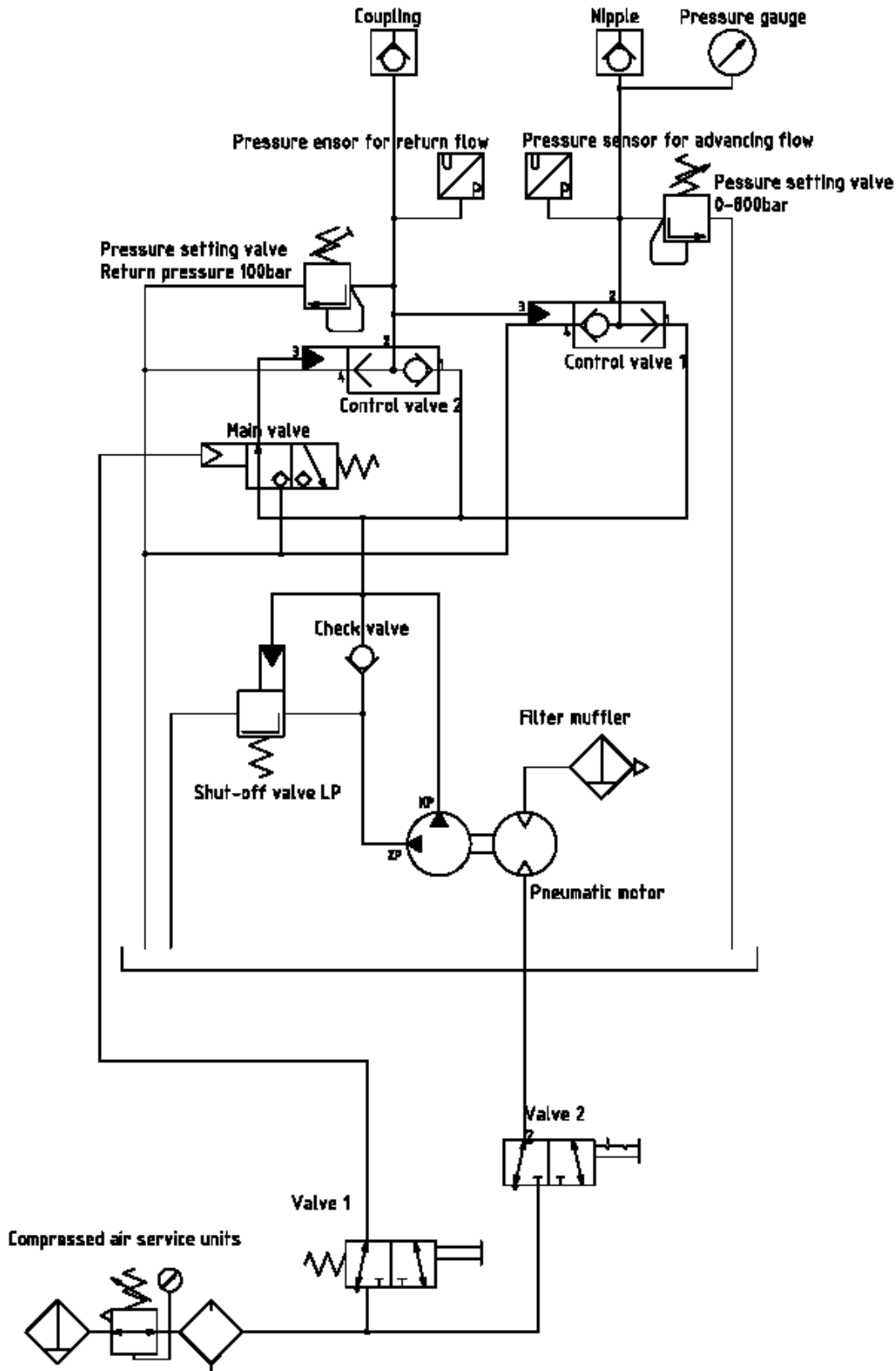
6.2. Actual Bolting

When actuating push button on remote control: Piston advances

When releasing push button on remote control: Piston retracts

- o Push button signed „manual“ on remote control and keep it depressed until bolting tool stops rotating.
- o This procedure has to be repeated until the bolting tool, even after repetitive pushing the button, does not start a rotation.

7. Circuit diagram





... a successful connection!

Maschinenfabrik Wagner GmbH & Co. KG
Birrenbachshöhe 17 | 53804 Much | Germany

Tel. national: (02245) 62-0
Fax national: (02245) 62-22
Phone international: +49 (0)2245 62-10
Fax international: +49 (0)2245 62-22
E-mail: info@plarad.de

www.plarad.de

79117
2_BA_X-P-Z-ATEX_GBR_1.0_79117
Version 20.06.2007
Letzte Änderung: 23.03.2021/PW