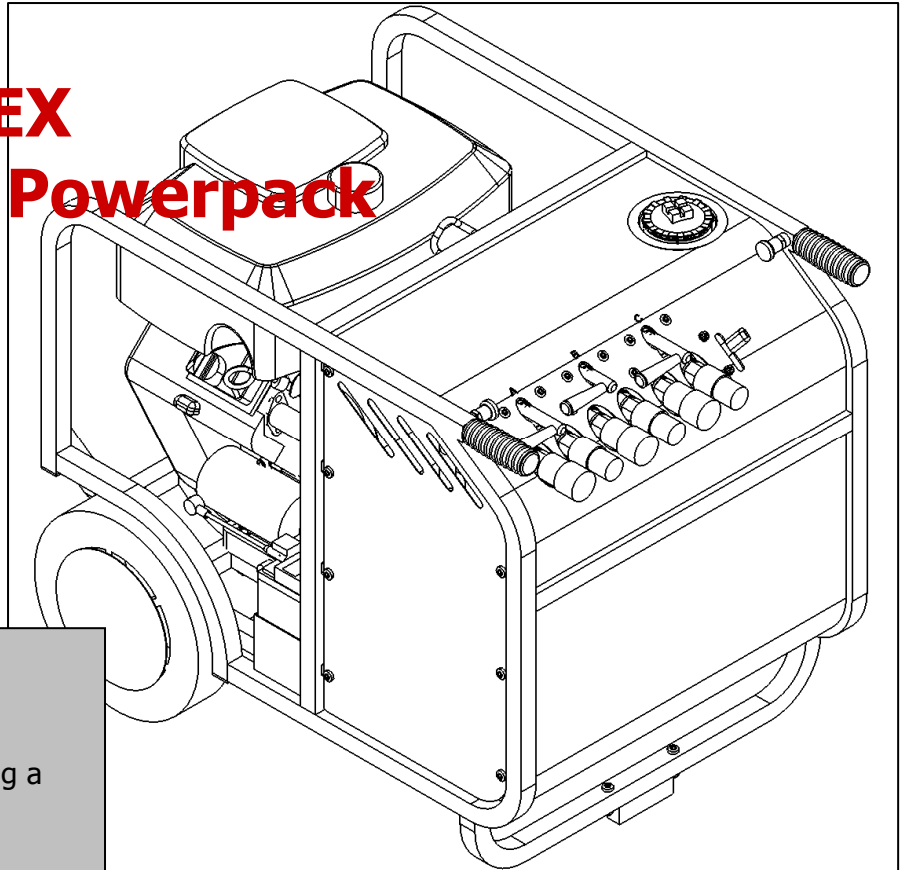


# Operating Manual

## **HPP18V MULTI FLEX Hydraulic Powerpack**

From serial  
number 2124

Revised  
12.05.09



### **Prior to Operation**

We thank you for choosing a HYCON powerpack.

Please note that the powerpack is delivered without hydraulic oil, and therefore it must be filled up with hydraulic oil prior to operation.

To ensure smooth operation and long-lasting performance of your new powerpack, we recommend that you study this operating manual carefully and pay special attention to the

### **Safety and Service Precautions**

We hope you will be satisfied with your new HYCON powerpack.

Best regards  
HYCON A/S



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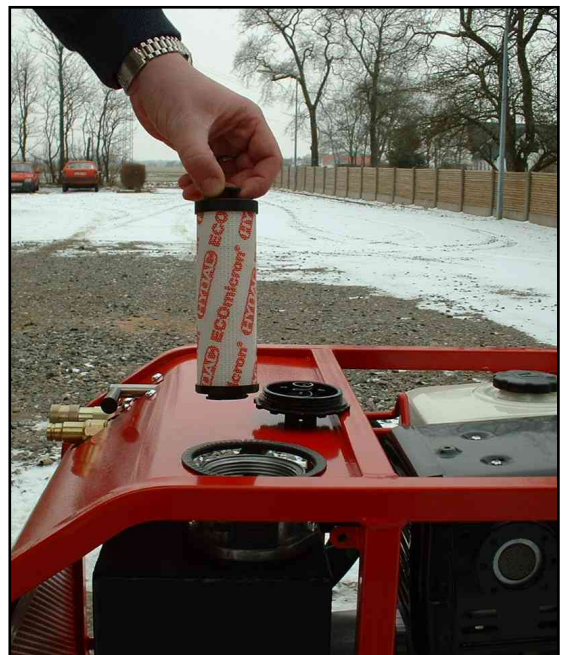
## Safety Precautions

1. Always use protective earplugs. The powerpack complies with the EU noise limit, but by daily long-lasting operation there is a risk of hearing defects.
2. Always connect hoses before starting.
3. Never add fuel and oil when the engine is running.
4. In case of non-operation or performance of service, always turn off the engine.
5. Never start the engine without side covers.
6. Operation of the powerpack without tool connected and with lever at "ON" may cause overheating of the system and damage to the powerpack.
7. When lifting the powerpack from a vehicle, we recommend the use of a crane.
8. The pressure relief valves are set at 160 bar from our plant. Never set them higher.
9. Always use filters with by-pass. The use of filters without by-pass may blow the hydraulic hoses and the filter cover.

## Filling Up Hydraulic Oil

- To fill up with hydraulic oil, loosen the filter cover on top of the powerpack.
- Remove the filter element (see photo), and fill up with oil. When oil is showing at the bottom of the filter unit, there is enough oil on the powerpack.
- Insert the filter element again, mount the cover and the powerpack is ready for use.

*Please note: When connecting new extension hoses, it is necessary to fill up with extra 2 litres of oil. Therefore always top up the powerpack when connecting new extension hoses.*



# Technical Data

## Hydraulics

The HYCON HPP18V MULTI FLEX open centre powerpack is designed in accordance with the EHTMA categories C, D and E, which prescribe a performance of 20, 30 and 40 l.p.m. respectively at 138 bar. The HYCON powerpack is fully compatible with and sufficient for the common European tools.

The powerpack is mounted with a double pump (two independent hydraulic circuits), and it has three connections for each circuit separately or both circuits simultaneously. This way the powerpack can operate two tools simultaneously. For a more detailed description, please refer to the section about "Setting of Flow"

The powerpack is mounted with pressure relief valves to avoid a too high pressure. Furthermore, the very efficient air cooling protects the powerpack against overheating. The powerpack has no POR system, and the engine r.p.m. (oil flow) is adjusted manually by means of the throttle.

<b>Oil flow connection A</b>	20 l.p.m. at 1800 r.p.m. 30 l.p.m. at 2700 r.p.m. 40 l.p.m. at 3600 r.p.m.
<b>Oil flow connections B and C</b>	10 l.p.m. at 1800 r.p.m. 15 l.p.m. at 2700 r.p.m. 20 l.p.m. at 3600 r.p.m.
<b>Working pressure nominal</b>	120 bar
<b>Pressure relief valves</b>	Set at 160 bar
<b>Pump</b>	Double gear pump
<b>Oil temperature</b>	Max. 70° C
<b>Capacity hydraulic oil tank</b>	Min. 8 litres/max. 11 litres
<b>Capacity petrol tank</b>	8.5 litres
<b>Hydraulic system complete</b>	12 litres
<b>Filter system (filter element)</b>	25 Micron with by-pass
<b>Engine</b>	Vanguard 2-cylinder 18 HP (gross power) 4-stroke petrol Normal or unleaded petrol Engine oil 1.1 litres
<b>Guaranteed sound power level <math>L_{WA}</math></b>	101 dB
<b>Sound pressure level 1 m <math>L_{PA}</math></b>	89 dB
<b>Dimensions (LxWxH)</b>	850x625x695 mm
<b>Weight w/o hydraulic oil</b>	112 kg

# Starting Instructions

Please observe the starting instructions on the front of the powerpack.

- Start:**
- Check engine oil level
  - Check hydraulic oil level at sight glass
  - Connect hoses and tool
  - Switch fuel tap to "ON"
  - Activate choke
  - Turn ignition key
  - Activate electric start or pull recoil starter
  - Set the flow – see below
- Stop:**
- Move all levers to "OFF"
  - Turn off the ignition switch
  - Turn the fuel tap to "OFF"

# Setting of Flow

The powerpack has three connections, allowing for connection of two tools simultaneously. The connections are marked A, B and C, respectively.

The oil flow can be adjusted by regulating the engine r.p.m. by means of the throttle. Connection A can be set to 20-40 l.p.m. Connections B and C can be set to 10-20 l.p.m. Connection A cannot be used simultaneously with connections B and C.

Each connection is equipped with an ON-OFF lever. Connections not in use must be set at OFF, and connections in use must be set at ON. Connections B and C can only be used when connection A is OFF. Never turn the lever to ON if no tool is connected.



# Service, Maintenance and Hydraulic Settings

Service/Maintenance	Daily	Weekly	Yearly
Engine oil	Check		1 x replacement
Hydraulic oil	Check		1 x replacement
Hydraulic oil filter *)			1 x replacement
check hoses		(tighten up if needed)	
Air filter			1 x replacement
Fuel filter			1 x replacement

\*) use only filters with by-pass

## Hydraulic Settings

Check the working pressure by means of test equipment. The test equipment must comprise a pressure gauge, a flow meter and a valve for adjustment of pressure.

The pressure relief valves are placed on the valve block. There are two pressure relief valves (one for each hydraulic circuit), and they must be adjusted individually. The pressure relief valves are marked with B and C respectively.

1. Connect the test equipment to connection B, start the powerpack and move the B lever to ON and the A and C levers to OFF. Then close the valve on the test equipment and adjust the pressure relief valve B according to the technical data.

Adjust the pressure relief valve by loosening the lock nut and turning the adjustment screw in or out. "In" increases the pressure, and "out" decreases the pressure.

Retighten the lock nut after adjustment.

Connect the test equipment to connection C, start the powerpack and move lever C to ON and levers A and B to OFF. Then close the valve on the test equipment and adjust the pressure relief valve C according to the technical data.

2. Having adjusted the pressure relief valves correctly, set the working pressure to 100 bar by means of the valve on the test equipment. At 100 bar the oil flow should correspond to the flow rate which the lever is set at (see Setting of Flow).

If correct pressure/oil flow cannot be achieved by following the above instructions, the powerpack must be re-adjusted. If the pressure/oil flow is then still incorrect, the pump is defect and must be replaced.

## Oil Types

The HYCON powerpack uses standard hydraulic oil, i.e. all types of mineral oil and biodegradable oil, which comply with the following values:

Recommended viscosity	20-40 cSt
Permitted viscosity	15-1000 cSt
Viscosity index	Min. 100
Temperature area	-20° to +70° C



## EC-Declaration of Conformity

**HYCON A/S**

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We hereby declare that

**HPP18V MULTI FLEX hydraulic powerpack - from serial No. 2124**  
(with 13.4 kW petrol engine)

is manufactured in conformity with the EC Directives 2006/42/EC and 2000/14/EC.

**Notified Body 1585:**

AkustikNet A/S  
Frederikssundsvej 179 B  
DK-2700 Brønshøj  
Denmark

Guaranteed sound power level: 101 dB

HYCON A/S  
Juelstrupparken 11  
DK-9530 Støvring  
Danmark

A handwritten signature in blue ink, appearing to read "Henrik Steen".

Henrik Steen  
General Manager

2 January 2006



## **Warranty Conditions**

We grant 12 months warranty from the first date of operation – however, not more than 18 months from the date of delivery.

The warranty applies to faults that can be related to construction and production errors.

Faults caused by incorrect operation, incorrect handling, lack of maintenance or the like will not be accepted as warranty.

The warranty covers the parts necessary for repair and the suggested average time needed for repair.

For further warranty details, please contact your local dealer.