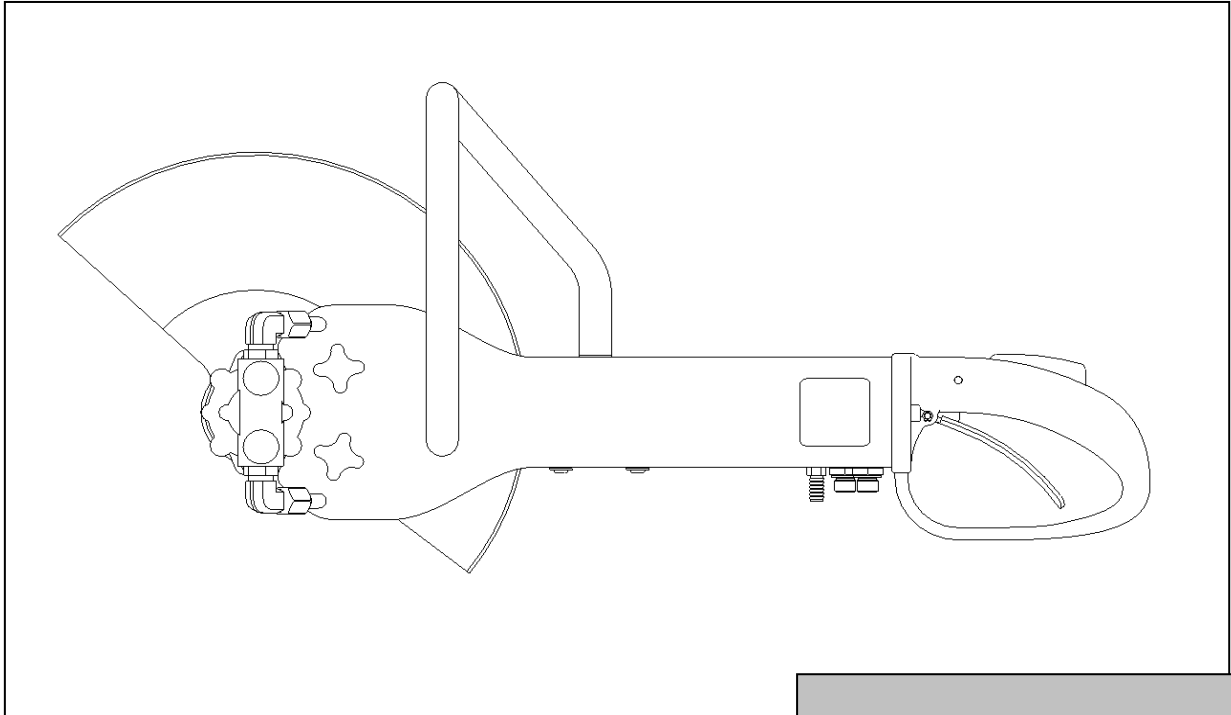


Operating Manual



HCS14/16/18 Hydraulic Cut-off Saw

From serial No. 0164

Revised
September 2003



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Prior to Operation

We thank you for choosing a HYCON cut-off saw.

To ensure smooth operation and long-lasting performance of your new cut-off saw, we recommend you to study this operating manual carefully and pay special attention to the chapters about

Safety and Service Precautions

We hope you will be satisfied with your new HYCON cut-off saw.

Best regards
HYCON A/S

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Safety Precautions

- Read the cut-off saw and power source operating manuals prior to use.
- Only use the cut-off saw in accordance with the local working regulations on allowed working time
- Check the oil supply to the cut-off saw. The oil supply may not exceed 30 l.p.m./172 bar for the 14" version, 40 l.p.m./172 bar for the 16" version, and 34 l.p.m./172 bar for the 18" version, respectively. Please refer to page 4. A too high oil supply can result in the speed of the diamond disc being too high, causing the disc to break.
- Make sure that the diamond disc is mounted correctly and firmly fastened.
- Always use diamond discs approved for handheld cutting and for the material to be cut.
- Always use discs that are in good condition.
- From the factory, the HYCON cut-off saw is mounted with a safety trigger, which may never be disturbed or dismantled.
- The cut-off saw has an automatic integrated security that makes the saw stop if the diamond disc jams. However, in case of jamming, always loosen the disc from the material, before you start cutting again.
- Start the cut-off saw just before you start cutting, and stop it again once the cutting is done. Do not let the cut-off saw run freely in the air.
- In case of horizontal cutting or cutting above the head, always be aware of material falling down.
- A fine jet of oil at pressure can penetrate the skin. It is therefore important never to use your fingers to check for oil leaks and never to hold your face close to suspected leaks – use a piece of cardboard instead. If oil has penetrated the skin, you should get medical treatment immediately.
- Never leave the cut-off saw when connected to the powerpack.
- Always use approved hoses. Contact your dealer, if necessary. Mount the hoses correctly so that the cut-off saw rotates in the right direction.
- The operator must pay extra attention and show caution when working in difficult working areas, such as slopes and other dangerous nature of the ground. Do not reach too far with the cut-off saw, but always maintain a good footing and keep your balance.

- The operator must be properly trained in using the cut-off saw or under supervision of a qualified instructor.
- The operator must always use protective goggles, earplugs, hard hat and shoes when operating the cut-off saw.
- Never use the cut-off saw close to electric cables. Prior to operation, check whether there are hidden or buried cables.
- Never wear loose clothing as it may get entangled in the moving parts of the saw.
- Inspection or cleaning of the cut-off saw, change of diamond disc or disconnection of hoses may never be done while the saw is connected to the powerpack, as unintentional activation of the saw can cause severe damage.
- Always connect hoses to the cut-off saw before starting the powerpack. Be sure that all couplings are tight.
- The cut-off saw may not be operated if the oil temperature is above 80 C°. Operation at higher temperatures may result in the cut-off saw getting warmer than normal and the operator risks getting burnt on it.
- To avoid all personal injury and damage to material, all repair, maintenance and service work must be carried out by authorized or properly trained persons only.

IMPORTANT

- A cut-off saw not in use should always be kept in a safe and dry place.
- Always make sure that the saw labels and warning signs are legible.
- Always use hoses, couplings and spares as such recommend by HYCON A/S.
- Repairs may only be carried out by experienced personnel.
- Make sure that all couplings are cleaned before connection.
- Always disconnect the hydraulic circuit before connecting or disconnecting the cut-off saw. If this is not done, there is a risk of damage to the quick release couplings or the hydraulic system getting superheated.

Oil Supply and Pressure

Your new HYCON cut-off saw is designed for a certain oil supply, working pressure and maximum pressure. A too high oil supply and/or a too high pressure results in overload of the cut-off saw, meaning that the lifetime of your new HYCON tool will not be as expected, and that your service and repair costs will be too high.

It is important to check that the cut-off saw is not supplied with an oil flow beyond its design capacity, that the working pressure is correct and that the maximum allowed pressure is not exceeded.

On page 6 you will find the technical data, and on page 8 there is a guide to connection to hydraulic power sources and how to ensure that the cut-off saw is not overloaded.

Useful Information re. the Use of Cut-Off Saw

The HYCON cut-off saw is a compact tool with great performance. There are no other cut-off saws on the market with higher performance in relation to size.

It is the perfect tool for cutting in all types of concrete, brick wall, asphalt etc.

The cut-off saw can be mounted in a HYCON cart, but most frequently it is used for handheld cutting jobs. This is only possible due to an automatic safety function that makes the cut-off saw stop immediately if the disc jams.

The cut-off saw has two handles for optimum operator comfort.

The saw is unaffected by water and can be operated in all working environments, even for cutting under water.

The cut-off saw can also be connected to excavators and other machines. We recommend the use of a HYCON oil flow divider, which protects against too high oil supply, too high pressure and backwards rotations. See page 8.

The cut-off saw is designed for both dry and wet cutting. Usually the best result is achieved by wet cutting, as this cools the disc and removes the bore meal. This results in as little wear on the disc as possible.

The utility values of your HYCON cut-off saw are numerous, and you will be pleased with your investment.

Starting Instructions

START

- Mount a diamond disc
- Connect hoses – clean couplings before connection. Connect water supply.
- Set the power source on "ON".
- Find a good footing for the cutting.
- Activate the safety trigger, press the trigger lever towards the handle and start the saw.
- Start by holding the disc towards the material. When gradually a groove is cut, press the disc towards the material and cut through.
- It is important to keep the water supply steady and sufficient as it cools the disc, removes the boremeal and guarantees you the best result with as little wear on the disc as possible.

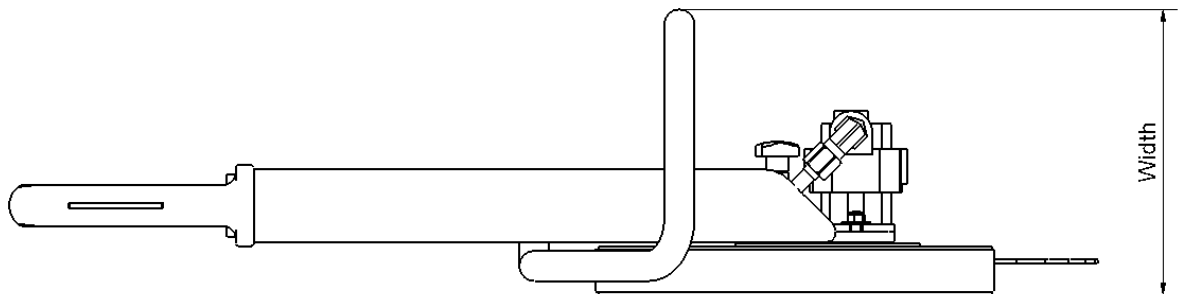
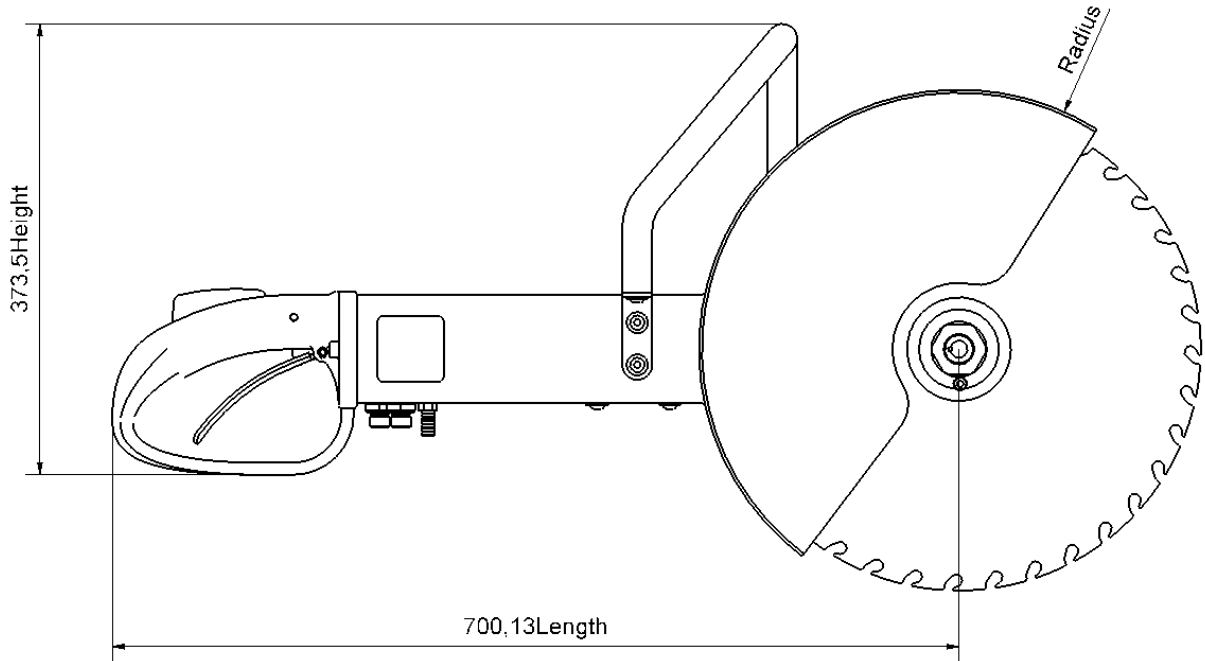
STOP

- Remove the disc from the material, and let go of the trigger lever.
- Set the power source on "OFF", and disconnect the water supply.

Technical Data

	14" Cut-off Saw	16" Cut-off Saw	18" Cut-off Saw
Weight w/o hoses and disc	9.7 kg	10.5 kg	11.2 kg
Oil flow	20-30 l.p.m.	20-40 l.p.m.	20-34 l.p.m.
Working pressure nominal	120 bar	120 bar	120 bar
Pressure relief valve on power source	Max. 172 bar	Max. 172 bar	Max. 172 bar
Max. return pressure	40 bar	40 bar	40 bar
Max. oil temperature	80° C	80° C	80° C
Number of revolutions	2500-3800 r.p.m.	2000-3800 r.p.m.	2000-3300 r.p.m.
Circumferential speed	46-70 m/s	42-80 m/s	47-80 m/s
Disc size	ø350-ø360 mm	ø400-ø410 mm	ø450-ø460 mm
Arbor size	ø25.4 mm	ø25.4 mm	ø25.4 mm
Cutting depth	137 mm	162 mm	187 mm
Vibration level	< 2.5 m/s ²	< 2.5 m/s ²	< 2.5 m/s ²
Sound pressure level 1 m L_{PA}	92 dB	93 dB	93 dB
Sound power level L_{WA}	103 dB	104 dB	104 dB
Necessary cooling capacity on power source	1 kW	1 kW	1 kW

Dimensions



Tool	Length mm	Height mm	Width mm	Radius mm
14" saw	700	373	236	188
16" saw	700	373	236	215
18" saw	700	373	236	238

Connection to Hydraulic Power Sources

The cut-off saw can be connected to various hydraulic power sources, such as excavators, trucks, loaders, tractors etc., and of course HYCON powerpacks, the design of which ensures your new HYCON cut-off saw the absolute best working conditions.

It is important that the cut-off saw is not subjected to an oil supply and a working pressure beyond its design capability. Please refer to the ID-tag on the saw in case of doubt.

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

Make sure that:

- the oil supply is not too high
- the working pressure is not too high
- the return pressure is not too high
- the pressure relief valve is not set higher than 172 bar
- the internal diameter of the hoses is sufficient (min. ½")
- all couplings are in order
- the power source is equipped with an oil filter of min. 25 Mikron

Hoses with too small internal diameter and/or defect couplings cause the cut-off saw to work with incorrect working pressure.

Your dealer can help you check this.

If the output of the power source is too high:

- the power source must be adjusted to correct output
- or you can choose to mount a HYCON oil flow divider to protect the cut-off saw against overload
- or you can choose one of our HYCON powerpacks. Your dealer can guide you in choosing the right powerpack.

In case of doubt, please contact your dealer or HYCON A/S.

Service and Maintenance

Service/Maintenance	Daily	Weekly	Yearly
Check couplings and clean carefully	X		
Check hoses	X		

NB. At service/repair it is important to mount the hoses correctly.

Oil Types

The HYCON cut-off saw 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

If using biodegradable oil, we recommend the use of oil based on rape. Other types of oil can be aggressive towards the seals. If you are in doubt, please ask your dealer.



EC-Declaration of Conformity

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From Serial No.

We hereby confirm that **cut-off saws HCS14, HCS16 and HCS18**

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are manufactured in conformity with EC-directive 98/37/EC.

HYCON A/S
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DK-9320 Hjallerup
Denmark

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

Henrik Steen
General Manager

01.09.2003

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.