# Parts List/Teileliste/Liste de Pièces

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Qty</th>
<th>Menge</th>
<th>Ché</th>
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<th>Item No.</th>
<th>Part No.</th>
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<th>Menge</th>
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</table>

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Carry out a trial tapping operation and inspect the finished thread form, adjust as necessary Figure 3 (11/13) and repeat until information in NOTES 1 and 2 are satisfied.

SERVICING REQUIREMENTS

General Notes

Use the following lubricants:

Greas -_filt H Type Q5516, for gears, splines and threads.
Greas -_polytite PG71 Plastipl, for 'O' rings and seals.

Cleaning

Requirements:

1) Container to Immense components.
2) Good quality clean paraffin.

Soak the components in the container containing the paraffin. Ensure full immersion, agitate components to ensure that all passages are flushed through. Remove components from the container, thoroughly dry and blow through air passages to remove moisture. Place components in an air tight container until required for reassembly. Dispose of the dirty paraffin in accordance with health and safety regulations.

MAINTENANCE

It is recommended that the tool is serviced at 1000hrs running time.

WARNING

THE BEARING SLEEVE COMPLETE IS UNDER SPRING (29) COMPRESSION, Whilst resisting the thrust due to the spring (29), carefully unscrew and remove the bearing sleeve complete followed by the spring.

Dismantle the tool using the exploded view. Clean all components and inspect for wear or damage, exchange if necessary. Apply new lubricant to the relevant parts as necessary. Reassemble the tool using the exploded view.

Torque values given are ±5%.

Special tools shown in exploded view are in addition to normal workshop tools.

NOTE: Protective gloves and eye protection should be worn during cleaning of parts. Eating or smoking is prohibited when cleaning, dismantling or assembling tool.

Worn components should be carefully handled and disposed of safely.

Electric Motor

Electric motor testing and checking as necessary should be carried out in accordance with the relevant section of the Health and Safety Act.

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Hydraulic Check Unit (HCU) - The tool will function satisfactorily, when drilling a blind hole at the set feed rate. Should it be required to break through the material and possibly through into another hole, feed acceleration will occur with possible drill breakage. To obviate this, the removal of an HCU is strongly recommended. Request information from Desoutter.

Peack Feed Drills - The Desoutter Peack Feed Drill System should be used when the depth of the hole to be drilled is five or more times the hole diameter. This helps clear drill chips and avoids excessive overheating of drill bit. Hole size accuracy can be improved and drill bit run-out can be kept to a minimum. Request information from Desoutter.

Dust Extraction Kits

<table>
<thead>
<tr>
<th>Extension Tube</th>
<th>Nominal Stroke Length</th>
<th>Locking Screw Length</th>
<th>Kit Part No.</th>
</tr>
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<tr>
<td>251013</td>
<td>45 mm</td>
<td>140 mm</td>
<td>52172</td>
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<td>251003</td>
<td>75 mm</td>
<td>200 mm</td>
<td>52182</td>
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<tr>
<td>250993</td>
<td>105 mm</td>
<td>200 mm</td>
<td>52182</td>
</tr>
</tbody>
</table>

The extraction kit must be used in conjunction with an extension tube. The two outlet fits over the tube chuck key insertion slot, and is locked by two screws. Dust Extraction Kits must be used with an external vacuum collection system.

SETTING DRILLING OPERATION (See Figure 5)

The drill must be at least 6mm (.254) above the work piece.

FIGURE 6 ADJUSTING THE TIMING BELT

Set the gap between the (1) and (2) to equal the depth of drilling required PLUS the distance the bit is above the work piece, by sliding (3). Lock in position with (4) to the recommmended torque.

Position the HCU in (3). Set the gap between (6) and (7) to a distance as required above the work piece.
(4) Ensure that the work piece is securely clamped before commencement of operation.

(5) Clear all loose items from the vicinity.

(6) Ensure that the tool is securely clamped around the outer case before commencement of operation.

(7) Ensure that safety guards are fitted.

(8) Beware of tool output. This advances and rotates.

(9) Eye and ear protection must be worn when operating the tool.

(10) Do not operate the tool in explosive atmospheres.

(11) When machining hazardous materials, provision must be made for dust collection or suppression.

(12) Ensure that an emergency stop is provided for the tool, whether used alone or built into a machine. A suitable emergency stop circuit is detailed in Figure 2.

(13) On advance the tool is under spring compression, therefore upon air shutoff it will return to datum.

**Figure 3 Valve Block Module Complete**

**Control Valve (Figure 3)**

The valve block module complete (1) contains all the control functions and signal origins for external control.

The control valves and locations are identified below and detailed in the diagram.

**Location**

2. Main Air inlet port, tapped 1/4 BSP or NPT.


5. 1st remote start input port, tapped M5. Receiver external signal to start tool cycle.


7. 1st retract output port, tapped 1/8in BSP, supply for air return.

10. Stroke control valve.

11. Feedback regulating screw.

12. Position for "S1" solenoid valve for electric start.


15. 'D' port, tapped M6, BSP receives signal to return the feed to start position for pack feed or dwell control.

16. Position for "S1" solenoid valve for emergency retract.

17. 'W' port, tapped M5. Used for sequencing control. The signal is produced when the tool is at rest.

NOTE: The 'W' port is intended for the operation of pilot valves. It must not be used as a source of air supply for other uses.

† Available in kit form. See Desoutter catalogue for details.

**Simple Control Block (103882) (Figure 4)**

This control valve block module is used when the tool is not controlled remotely. Figure 4 details the signal origins.

NOTE: External circuitry will be required to control the speed of advance and retract feeds.

**Location**

1a. Position for SW1 proximity switch, using actuating pin.

1b. Position for SW1 proximity switch, using sleeve on extension tube.

Both 1a and 1b detect a signal when the tool is at the datum position.
OPERATORS INSTRUCTIONS

Air Supply - Main

A water-free and filtered air supply is required, at a pressure of 8.3 bar (114 Pa), with a flow rate of 9.9 l/s (33 cu.ft/min) controlled by a pressure regulator selected from the Desoutter Air Line Service Equipment Catalogue.

Air Supply - Remote

The basic requirements are as above but the pressure must be at least 2.7 bar (40 Pa) and the flow requirement when signalling is 0.47 l/s (16cu.ft/min). The signal duration should be kept to the minimum to reduce air consumption.

Lubrication

Correct lubrication is vital for maximum performance of the tool and an oil line lubricator selected from the Desoutter Air Line Service Equipment Catalogue should be fitted to the system down stream of the filter.

Desoutter recommend the use of ISO Viscosity Classified oil, grade number ISO VG 15, in the lubricator.

The tool can be operated on dry lines.

Electricity Supply

The motor must be connected to a three phase supply in accordance with the VOLTAGE CHART and provided with a starter fitted with an overload protection.

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Voltage Chart - 3 Phase (AFDE82/AFDE82C)

<table>
<thead>
<tr>
<th>Recommended</th>
<th>Voltage</th>
<th>Frequency</th>
<th>Motor</th>
<th>Overload</th>
</tr>
</thead>
<tbody>
<tr>
<td>Star/Convertible</td>
<td>V</td>
<td>Hz</td>
<td>Connectors</td>
<td>Setting</td>
</tr>
<tr>
<td>1801/FI</td>
<td>220 to 240</td>
<td>50</td>
<td>Delta</td>
<td>3.1 to 3.5</td>
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<tr>
<td>2010/FI</td>
<td>220 to 240</td>
<td>60</td>
<td>Delta</td>
<td>3.3 to 3.6</td>
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<tr>
<td>2010/FU</td>
<td>380 to 440</td>
<td>60</td>
<td>Star</td>
<td>1.9 to 2.4</td>
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<tr>
<td>2010/optim</td>
<td>380 to 520</td>
<td>60</td>
<td>Star</td>
<td>1.9 to 2.4</td>
</tr>
</tbody>
</table>

Connecting to the Electrical Supply

WARNING:

1. ENSURE THE SUPPLY IS OFF BEFORE MAKING CONNECTIONS.
2. STAR AND DELTA CONNECTIONS ARE TO BE STRICTLY IN ACCORDANCE WITH THE SUPPLY VOLTAGE GIVEN IN THE CHART. ANY DEVIATION FROM THE CHART WILL RESULT IN DAMAGE TO THE TOOLS.

Determine the supply voltage and refer to the voltage chart for motor connection details.

For Y (star) connection, connect terminal W1 to U2 and U2 to V2.

For △ (Delta) connection, connect terminal W2 to U1, U2 to V1 and V2 to W1.

In both methods the motor will be direct on line connected.

NOTE: The terminals are fitted with 4mm positive screws and the connecting links are connected between the screws. The earth connection is a 4mm positive screw for which a suitable screwdriver will be required.

IMPORTANT: Do not remove or loosen the bottom nut on the terminals.

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FIGURE 1

For all voltages: The supply cable (min. cable rating: armoured flexible 1.0mm2 conductors) is connected to the motor terminals U1, V1, W1 and earth, which are in the terminal box (see Figure 1). A suitable cable clamp should be fitted to the terminal box provided with outer (19mm diameter) "KNOCK-OUTS".

The Electric Motor

The motor is a totally enclosed, fan-cooled three-phase squirrel cage, class B insulated, with a minimum terminal temperature of 40°C. Looking at the fan end of the motor the rotation should be anti-clockwise, if the rotation is opposite, interchange connections U1 and V1 to correct the rotation.

DATA

Maximum air pressure Pmax = 8 bar
Minimum air pressure Pmin = 6 bar
Sound pressure level = <70 dB CAGFNEUF Test Code
Weight = 11 kg

Statement of Use

This tool is designed for drilling holes, but may be adapted for other specified purposes, using Desoutter approved accessories.

NOTE: Provision must be made for an Emergency Stop. The tool is used alone or built into a machine. A suitable circuit diagram for manufacturing an Emergency Stop is provided in Figure 2.

WARNING:

1. ALWAYS DISCONNECT THE TOOL FROM THE AIR SUPPLY BEFORE ATTEMPTING ANY REPLACEMENT, ADJUSTING, SERVICING OR DISMANTLING.
2. ENSURE THAT NO LOOSE ARTICLES OF CLOTHING, LOOSE HAIR, OR CLEANING MATERIAL CAN BE CAUGHT BY THE MOVING PARTS OF THE TOOL.
3. ALWAYS ALLOW THE TOOL TO STOP BEFORE REMOVING THE WORK. 

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