



# DM14

## 4-Speed

# Diamond Core Drilling Motor

### For Wet Drilling of Reinforced Concrete

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Internal & Confidential

**AGP** | DM14 Rig-Mounted Diamond Core Drilling Motor

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# Introduction

## Target group & Applications

### DM14 Introduction

The DM14 is a rig-mounted core drilling motor for wet drilling up to 400 mm in reinforced concrete. It runs on single phase 230 V at 16 A input. The universal motor is rated at an impressive 3500 W input. There are 4 mechanical gear ratios to cover its range of operation, allowing the speed to be matched to the bit diameter.

Safety for the user and protection of the tool are provided by a robust, yet accurate mechanical clutch in combination with a complete electronic motor protection package including soft-start, thermal protection, and overload protection. The electronics also include the slow start function, which automatically assists in starting the kerf. The operator is able to monitor the load level visually with the LED Load Indicator, and additionally, the AVR system also warns the operator of overload conditions by slowing the motor at the load limit, allowing uninterrupted operation.

Durability is ensured by the all metal construction and the special waterproof reed-type switch, which is much more reliable than traditional switches and includes anti-restart functionality.

Altogether, this makes the DM14 a great combination of efficient performance and excellent useability.

### Target Groups and Applications

The DM14 will be the primary choice for operators who need to wet drill large diameters up to 400 mm in reinforced concrete. It will be a great choice for drilling companies, contractors, and anyone who needs a robust, high performance drilling motor.

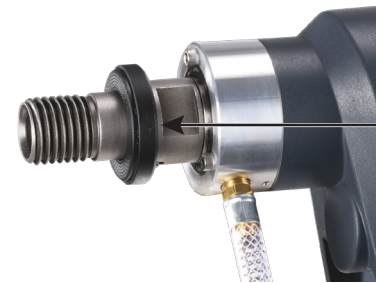


# Sales Arguments



## 3500 W Universal Motor with Aluminum Housing

The high-efficiency motor features complete electronic protection, including overload and thermal protection, as well as soft start. It also features Slow Start: which automatically runs the motor slowly for a short time, which assists in starting the kerf.



## Anti-Seize Ring

The motor comes standard with an anti-seize ring which helps prevent the bit becoming stuck on the spindle.



## Robust Oil-Bath Gearbox

The 4-speed oil-bath gearbox allows optimized torque and drilling speeds for an extremely wide range of diameters. The mechanical slip clutch protects the system.



## Spirit Levels

Horizontal and vertical spirit levels are built into the motor for more convenient set-up.



## Intuitive Load Warning Systems

1. The motor gives the operator load information in 2 ways:
2. The LED Load Indicator gives visual information.

And the AVR System automatically slows the motor at the load limit. Together these make it intuitive and easy to operate the motor at its optimal load range for maximum work efficiency.

## Special Waterproof Switch

The switch's reed-type operative element is completely impervious to water, dust or slurry, thus eliminating a common failure point in coring motors. The switch also features anti-restart function.

# Technical Specifications

|                              |   |
|------------------------------|---|
| Model                        | DM14  |
| Power Input                  | 3500 W / 16 A (220 V), 2800 W / 25 A (110 V)        |
| Voltage, Frequency           | 220-240 V~ 50-60 Hz or 110-120 V~ 50-60 Hz          |
| No Load Speeds               | 385 / 530 / 975 / 1340 min <sup>-1</sup>            |
| Rated Load Speeds            | 225 / 300 / 565 / 780 min <sup>-1</sup>             |
| Drilling Capacity            | Ø400 mm (16")                                       |
| Gear Oil Type                | 80W-90  |
| Gear Oil Capacity            | 625 ml  |
| Spindle Thread               | 1-1/4" UNC male & 1/2" BSP female                   |
| Insulation Class             | Class I with PRCD / GFCI (110-120V w/o PRCD / GFCI) |
| Soft Start & Overload        | With  |
| ProtectionDimensions (LxWxH) | 550 x 155 x 210 mm                                  |
| Weight                       | 13.5 kg (29.7 lb)                                   |



- 1 Spindle
- 2 Anti-Seize Ring
- 3 Motor Unit
- 4 Tail Handle
- 5 Power Supply Cord
- 6 Gear Selector
- 7 Water Feed Valve
- 8 Horizontal Spirit Level
- 9 Motor Start / Stop Switch
- 10 LED Load Indicator
- 11 Vertical Spirit Level



# Offer Content

## Standard Accessories

- 1 DM14 Three-Speed Diamond Core Drilling Motor

## Optional Accessories

- 2 40mm Extension Spacer Kit

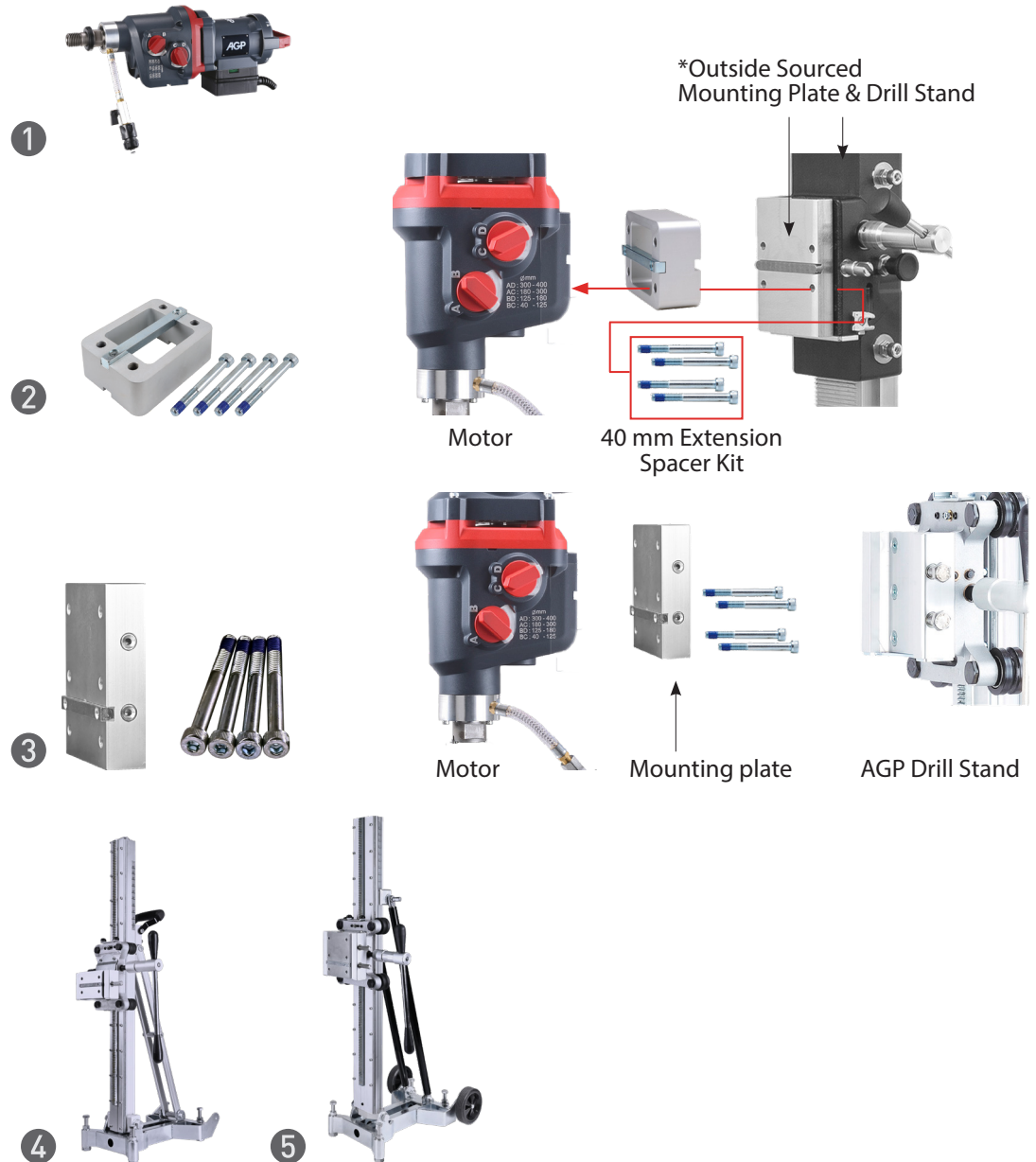
This spacer kit is not necessary with AGP drill stands, but may be necessary when mounting the motor to some models of other manufacturers' drill stands. The spacer fits between the motor and the stand's mounting plate to provide clearance and prevent the motor from interfering with the stand. Screws are included. (The spacer also adds an extra 80 mm to the maximum core bit diameter with a given stand.)

- 3 Mounting Plate (AGP drill stands only)





















Long type, for use with AGP drill stands. The plate is standard equipment with large AGP drill stands, so you only need to buy the mounting plate if you need to use multiple motors sharing the same drill stand.

- 4 S350 Drill Stand

- 5 S500 Drill Stand



# Comparison Table

| Brand                             |    |  |  |  |  |  |  |
|-----------------------------------|---|---|--|---|---|---|---|
| 350mm Wet Drilling                |    |  |  |  |  |  |  |
| Model                             | DM14  | DK34  | DM 430   | DM 340  | BDB 835   | T9 475-EL   | PLD 450.2 B   |
| Power Input                       | <b>230 V: 3 500 W</b>    | 230 V: 3 200 W  | 230 V: 3 200 W   | 230 V: 3 300 W  | 230 V: 3 000 W  | 230 V: 3 420 W  | 230 V: 3 300 W  |
| Rated Load Speeds                 | <b>Gear 1: 225 /min<br/>Gear 2: 300 /min<br/>Gear 3: 565 /min<br/>Gear 4: 780 /min</b>  | Gear 1: 150 /min<br>Gear 2: 300 /min<br>Gear 3: 470 /min                          | Gear 1: 150 /min<br>Gear 2: 300 /min<br>Gear 3: 470 /min                           | Gear 1: 170 /min<br>Gear 2: 380 /min<br>Gear 3: 645 /min                            | Gear 1: 215 /min<br>Gear 2: 430 /min<br>Gear 3: 785 /min                            | Gear 1: 190 /min<br>Gear 2: 360 /min<br>Gear 3: 600 /min<br>Gear 4: 1000 /min       | Gear 1: 150 /min<br>Gear 2: 340 /min<br>Gear 3: 700 /min                            |
| Capacity                          | <b>50 - 400 mm</b>  | 80 - 400 mm   | 100 - 450 mm   | 60 - 400 mm   | 60 - 400 mm   | 40 - 475 mm   | 71 - 452 mm   |
| Spindle                           | <b>1-1/4"-7 &amp; 1/2" BSP</b>  | 1-1/4"-7 & 1/2" BSP   | 1-1/4"-7 & 1/2" BSP  | 1-1/4"-7 & 1/2" BSP   | 1-1/4"-7 & 1/2" BSP   | 1-1/4"-7 & 1/2" BSP   | 1-1/4"-7  |
| Weight                            | <b>13.5 kg</b>  | 12.9 kg   | 14.2 kg  | 14 kg   | 12.2 kg   | 14 kg   | 15.3 kg   |
| Waterproof Reed Switch            | <b>Yes</b>   | No  | No   | No  | No  | No  | No  |
| Anti-Seize Ring                   | <b>Yes</b>   | Yes   | Yes  | No  | Optional  | Optional  | No  |
| Gearbox Lubrication               | <b>Oil Bath</b>   | Oil Bath  | Oil Bath   | Oil Bath  | Oil Bath  | Oil Bath  | Oil Bath  |
| Mechanical Clutch                 | <b>Yes</b>  | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |
| Spirit Levels                     | <b>Yes</b>   | No  | No   | No  | No  | No  | No  |
| Load Warning System               | <b>AVR System + LED Load Indicator</b>   | Intellitronic   | Elgard   | Elgard + LED Indicators   | LED Indicator only  | Cardi Electronic Clutch   | LED Indicator only  |
| Overload and Thermal Protection   | <b>Yes</b>  | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |
| Soft Start                        | <b>Yes</b>  | Yes   | Yes  | Yes   | Yes   | Yes   | Yes   |
| Slow Start Hole Starting Function | <b>Yes</b>   | No  | Yes  | Yes   | No  | No  | No  |
| Motor Housing Material            | <b>Aluminum</b>   | Aluminum  | Aluminum   | Plastic   | Plastic   | Aluminum  | Aluminum  |
| Remarks                           | <b>Highest power of the group</b>   | No load indicator, no spirit levels   | No load indicator, no spirit levels  | Plastic motor housing, no spirit levels   | Plastic motor housing, no spirit levels   | No load indicator, no spirit levels   | No spirit levels  |
| Conclusion                        | The <b>AGP</b> has the highest power rating in this group while also having the most complete range of features, such as the AVR surge-type load warning system combined with the visual LED load indicator, slow start hole starting function, and included spirit levels. It is one of the few motors in this group with 4 speed gearbox, for a wider range of optimum drilling speeds. The <b>AGP</b> offers the best combination of performance and value in one product. |   |  |   |   |   |   |

# Comparison Table

Brand



350mm Wet Drilling

| Model                             | DM14  | BBM (E) 33L  | DME 33 UW  | DDM 33   |
|-----------------------------------|---|--|--|--|
| Power Input                       | 230 V: 3 500 W  | 230 V: 3 300 W   | 230 V: 3 300 W   | 230 V: 3 300 W   |
| Rated Load Speeds                 | Gear 1: 225 /min<br>Gear 2: 300 /min<br>Gear 3: 565 /min<br>Gear 4: 780 /min  | Gear 1: 180 /min<br>Gear 2 :430 /min<br>Gear 3: 750 /min | Gear 1: 180 /min<br>Gear 2 :430 /min<br>Gear 3: 750 /min | Gear 1: 180 /min<br>Gear 2 :430 /min<br>Gear 3: 750 /min |
| Capacity                          | 50 - 400 mm   | 45 - 450 mm  | 45 - 450 mm  | 45 - 450 mm  |
| Spindle                           | 1-1/4"-7 & 1/2" BSP   | 1-1/4"-7   | 1-1/4"-7   | 1-1/4"-7   |
| Weight                            | 13.5 kg   | 13.2 kg  | 13.6 kg  | 13.6 kg  |
| Waterproof Reed Switch            | Yes   | No   | No   | No   |
| Anti-Seize Ring                   | Yes   | No   | No   | No   |
| Gearbox Lubrication               | Oil Bath  | Oil Bath   | Oil Bath   | Oil Bath   |
| Mechanical Clutch                 | Yes   | Yes  | Yes  | Yes  |
| Spirit Levels                     | Yes   | No   | No   | No   |
| Load Warning System               | AVR System + LED Load Indicator   | No (overload only)                                       | LED Indicator only                                       | LED Indicator only                                       |
| Overload and Thermal Protection   | Yes   | Yes  | Yes  | Yes  |
| Soft Start                        | Yes   | Yes  | Yes  | Yes  |
| Slow Start Hole Starting Function | Yes   | No   | No   | No   |
| Motor Housing Material            | Aluminum  | Aluminum   | Aluminum   | Aluminum   |
| Remarks                           | Highest power of the group  | No load warning, no load indicator, no spirit levels     | No spirit levels   | No spirit levels   |
| Conclusion                        | The <b>AGP</b> has the highest power rating in this group while also having the most complete range of features, such as the AVR surge-type load warning system combined with the visual LED load indicator, slow start hole starting function, and included spirit levels. It is one of the few motors in this group with 4 speed gearbox, for a wider range of optimum drilling speeds. The <b>AGP</b> offers the best combination of performance and value in one product. |  |  |  |

# Tool Dimensions (mm)

