

*Break Limits. Build Strength.*



# **Integrated Rock Drill & Split Machine (IRDSM)**





MK120H



MK140H



MK160H



MK220H



MK260H

| Specification               | MAKNA MK120H(Standard) | MAKNA MK140H(Enhanced) | MAKNA MK160H(Performance) | MAKNA MK220H(Heavy Duty) | MAKNA MK260H(Ultra |
|-----------------------------|------------------------|------------------------|---------------------------|--------------------------|--------------------|
| Excavator Match (tons)      | 20-30T                 | 30-36T                 | 30-50T                    | 30-40                    | 36-50T             |
| Dimensions(LxWxH,m)         | 4*1.6*1.7              | 4.2*1.6*1.8            | 4.8*1.7*2.2               | 5.5*2.1*1.9              | 5.9*2.2*2.0        |
| Total Weight (tons)         | 3.2                    | 4.1                    | 4.85                      | 10.5T                    | 11.5T              |
| Drilling Diameter(mm)       | 115mm                  | 132mm                  | 152 mm                    | 190 mm                   | 210 mm             |
| Drilling Depth (mm)         | 1.4m                   | 1.6m                   | 1.95m                     | 2.4+m                    | 2.4+m              |
| Avg.Drilling Speed(m/min)   | 0.8m/min               | 0.8m/min               | 0.8m/min                  | 0.8m/min                 | 0.8m/min           |
| Splitting Force(tons)       | 5000 tons              | 5000 tons              | 9000 tons                 | 12000 tons               | 20000 tons         |
| Splitter Wedge Length(mm)   | 1050mm                 | 1200mm                 | 1500 mm                   | 1900 mm                  | 2100 mm            |
| Split Distance(mm)          | 25 mm                  | 25 mm                  | 25 mm                     | 35 mm                    | 35 mm              |
| Split Time (sec)            | 8 sec                  | 8 sec                  | 10 sec                    | 15 sec                   | 20 sec             |
| Impact Energy(J)            | 350                    | 400                    | 480                       | 550                      | 580                |
| Impact Pressure (bar)       | 180                    | 180                    | 180                       | 180                      | 180                |
| Impact Flow (L/min)         | 180 L/min              | 350 L/min              | 450L/min                  | 530L/min                 | 580 L/min          |
| Impact Power(kW)            | 25kW                   | 65kW                   | 110 kW                    | 150 kW                   | 185kW              |
| System Rated Pressure(MPa)  | 40 MPa                 | 40 MPa                 | 32 MPa                    | 40 MPa                   | 40 MPa             |
| Air Compressor Displacement | 6.3 L/Min              | 8 L/Min                | 8L/Min                    | 12L/Min                  | 15 L/Min           |

## Operational Features

AI technology designed to maximize Performance, ensure Safety, and boost Efficiency.

### ● Efficiency & Performance



#### Inbuild Dual Function

Combines drilling + splitting → saves time, cost, and manpower.



#### Smart Oil, Air & Dust Control

Integrated Hydraulic-pneumatic system with water/air for smooth, quiet, dust-free operation..



#### Powerful Drilling & Splitting

Drilling depth up to 2.5 m, adjustable 60-120 RPM, splitting force up to 8000 tons.

### ● Safety & Control



#### Remote Control Operation

Safe, wireless, joystick-style controller for drilling & splitting.



#### Non-Blasting Technology

Eco-friendly, safe, and vibration-free rock breaking without explosives.



#### Precision Splitting Control

The adjustable wedge system enables controlled cracking of rock, precise direction & efficiency.

### ● Durability & ROI



#### Wide Excavator Compatibility

Fits 20-50 ton excavators with quick pin-shaft mounting.



#### Heavy-Duty Durability

Designed for extreme mining, quarrying, and construction conditions.



#### High ROI & Low Running Costs

One system replaces multiple machines, lowering fuel, labor, and service expenses.

## Operation & Control Instructions

### 1.Starting

Start excavator, close safety lock, ensure hydraulic oil is supplied.

### 2.Location Selection

360° rotation, automatic displacement compensation prevents lateral force damage.

### 3.Fixed Position

Use concave points only. Apply moderate downward pressure.

### 4.Drilling

Align drill, start compressor, use remote. Avoid forcing stuck rods.

### 5.Insert Splitting Block

Align block with drilled hole. Insert only to proper depth.

### 6.Splitting

Extend positioning shaft before splitting. Do not exceed 260 kg. Lubricate regularly.

### 🔧 Taboos & Troubleshooting

- ⚠️ Overloading → shortened block life / breakage
- ⚠️ No lubrication → destructive wear, jamming
- ⚠️ Splitting without free end → abnormal overload
- ⚠️ Shallow holes → wedge bending/jamming
- ⚠️ Wrong hole layout → lateral breakage
- ⚠️ Pulling drill by force → breakage
- ⚠️ Rotating frame during drilling → bent drill

### 📄 Maintenance Chart

- ✅ Change gearbox oil after 100-200 hrs (4-5 L)
- ✅ High pressure filter: first at 300 hrs, then every 1000 hrs
- ✅ Lubricate impactor every shift; never run without oil
- ✅ Reinforce screws after 24-48 hrs of use
- ✅ Grease sliders and gears once per shift
- ✅ Oil-fill split block holes per operation
- ✅ Close water valve & dry impactor after work



- ✔ It can work at multiple angles of vertical, inclined and horizontal.
- ✔ It has automatic pressurization system to achieve strong splitting force.
- ✔ It has automatic dust removal to protect the environment.
- ✔ It has wireless remote control which is safe and fast.

