# GEOMAT

INDUSTRIAL ENGINEERING SOLUTIONS

## Product Catalogue 2025

Drilling | Hydraulics | Fabrication | Environmental

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# DRILL RIGS

High-Performance Drilling Solutions for Exploration & Construction

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Drilling Method | Rotary, diamond core, RC, DTH |
| Maximum Depth | 500 m - 2,000 m (model dependent) |
| Pullback Force | 150 kN - 350 kN |
| Rotation Speed | 0 - 1,200 RPM (variable) |
| Feed Rate | 0 - 3.5 m/min hydraulic |
| Engine Power | 110 kW - 260 kW diesel |
| Hydraulic Pressure | Up to 250 bar operating |
| Mast Stroke | 3.0 m - 6.1 m |
| Chuck Capacity | BQ to PQ rod sizes |
| Fluid Pump Output | Up to 300 L/min at 70 bar |

## DIMENSIONS & AVAILABLE MODELS

| Model | Depth (m) | Pullback (kN) | Engine (kW) | Weight (kg) |
|---|---|---|---|---|
| GDR-150 | 500 | 150 | 110 | 8,500 |
| GDR-250 | 1,000 | 250 | 160 | 12,000 |
| GDR-350 | 1,500 | 300 | 200 | 16,500 |
| GDR-500 | 2,000 | 350 | 260 | 22,000 |

## APPLICATIONS

- Mineral exploration drilling
- Geotechnical site investigation
- Water well construction
- Environmental sampling & monitoring
- Construction piling & foundations
- Oil & gas exploration
- Infrastructure development

## MATERIALS & CONSTRUCTION

- Mast & subframe: High-tensile structural steel (S355)
- Hydraulic cylinders: Chrome-plated hardened steel rods
- Rotation head: Alloy steel with heat-treated gears
- Control panel: Marine-grade aluminium enclosure (IP65)
- Hoses & fittings: SAE 100R high-pressure rated
- Chassis: Heavy-duty fabricated steel with corrosion protection

# WIRELINE CORE DRILLING SYSTEMS

Precision Core Recovery Systems for Deep Exploration Programs

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Core Diameter Range | BQ (36.5mm) to PQ (85mm) |
| Drilling Depth Capacity | Up to 3,000 m (NQ size) |
| Core Recovery Rate | >98% in competent formations |
| Inner Tube Length | 1.5 m / 3.0 m / 6.0 m options |
| Overshot Assembly | Automatic latch & release mechanism |
| Operating Pressure | Up to 200 bar hydraulic |
| Rod Connection | Flush-joint threaded coupling |
| Bit Types Compatible | Diamond impregnated, surface set, PDC |
| Fluid Circulation | Standard & reverse circulation capable |
| Wire Rope Diameter | 8 mm - 12 mm galvanised steel |

## DIMENSIONS & AVAILABLE SIZES

| Size | Core (mm) | Hole (mm) | Tube Length (m) | Application |
|---|---|---|---|---|
| BQ | 36.5 | 59.9 | 1.5 / 3.0 | Soft to medium |
| NQ | 47.6 | 75.7 | 1.5 / 3.0 / 6.0 | General exploration |
| HQ | 63.5 | 96.0 | 1.5 / 3.0 | Large diameter sampling |
| PQ | 85.0 | 122.6 | 1.5 / 3.0 | Near-surface, soft ground |

## APPLICATIONS

- Mineral exploration & resource definition
- Geotechnical investigation for infrastructure
- Environmental site characterisation
- Groundwater monitoring well installation
- Coal exploration & quality assessment
- Underground mine development drilling

## MATERIALS & CONSTRUCTION

- Inner tubes: Precision-machined stainless steel (316L)
- Outer tubes: High-tensile alloy steel, heat-treated
- Latching mechanism: Case-hardened tool steel
- Core lifter: Spring steel with carbide inserts
- Seals & O-rings: Viton fluoroelastomer (high-temp rated)
- Landing ring: Chrome-molybdenum steel

# CORE BARRELS

Precision-Engineered Core Recovery Systems for Maximum Sample Integrity

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Core Diameter Range | BQ (36.5 mm) to PQ (85 mm) |
| Barrel Length Options | 1.5 m / 3.0 m / 6.0 m |
| Core Recovery Rate | >98% in competent formations |
| Operating Pressure | Up to 200 bar hydraulic |
| Rotation Speed | 0 - 1,500 RPM |
| Inner Tube Type | Fixed / Swivel / Triple tube |
| Thread Connection | API & proprietary flush-joint |
| Fluid Circulation | Standard & reverse circulation |
| Bit Compatibility | Diamond impregnated, surface set, PDC |
| Weight per Metre | 12 - 45 kg/m (size dependent) |

## DIMENSIONS & AVAILABLE SIZES

| Size | Core (mm) | Hole (mm) | Length (m) | Application |
|---|---|---|---|---|
| BQ | 36.5 | 59.9 | 1.5 / 3.0 | Soft to medium |
| NQ | 47.6 | 75.7 | 1.5 / 3.0 / 6.0 | General exploration |
| HQ | 63.5 | 96.0 | 1.5 / 3.0 | Large diameter |
| PQ | 85.0 | 122.6 | 1.5 / 3.0 | Near-surface |

## APPLICATIONS

- Mineral exploration & resource definition
- Geotechnical investigation for infrastructure
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- Underground mine development drilling

## MATERIALS & CONSTRUCTION

- Inner tubes: Precision-machined stainless steel (316L)
- Outer tubes: High-tensile alloy steel, heat-treated
- Latching mechanism: Case-hardened tool steel
- Core lifter: Spring steel with carbide inserts
- Seals & O-rings: Viton fluoroelastomer (high-temp rated)
- Thread connections: Induction-hardened alloy steel

# DRILL RODS

High-Strength Drill String Components for Deep Hole Applications

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Rod Type | Wireline, conventional, dual-wall |
| Outer Diameter Range | BQ (55.6 mm) to PQ (88.9 mm) |
| Wall Thickness | 4.0 mm - 7.0 mm |
| Rod Length | 1.5 m / 3.0 m / 6.0 m standard |
| Tensile Strength | 900 - 1,100 MPa minimum |
| Yield Strength | 750 MPa minimum |
| Thread Type | Flush-joint & step-joint connections |
| Straightness Tolerance | 0.5 mm per 3 m maximum |
| Surface Finish | Internal honed, external ground |
| Operating Torque | Up to 8,000 Nm (size dependent) |

## DIMENSIONS & AVAILABLE SIZES

| Size | OD (mm) | ID (mm) | Length (m) | Application |
|---|---|---|---|---|
| BQ | 55.6 | 46.0 | 1.5 / 3.0 | Shallow exploration |
| NQ | 69.9 | 60.0 | 1.5 / 3.0 / 6.0 | General drilling |
| HQ | 88.9 | 77.8 | 1.5 / 3.0 | Deep exploration |
| PQ | 114.3 | 101.6 | 1.5 / 3.0 | Large diameter |

## APPLICATIONS

- Diamond core drilling programs
- Reverse circulation drilling
- Directional & horizontal drilling
- Water well construction
- Geothermal energy exploration
- Mining production drilling

## MATERIALS & CONSTRUCTION

- Rod body: Seamless alloy steel tube (AISI 4130/4140)
- Thread joints: Induction-hardened, phosphate-coated
- Internal bore: Honed to Ra 1.6 surface finish
- Heat treatment: Quenched & tempered full length
- Corrosion protection: Zinc phosphate + thread compound
- Quality standard: ISO 10097 / DCDMA certified

# DIAMOND CORE DRILL BITS

Premium Cutting Tools Engineered for Maximum Penetration & Core Quality

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Bit Type | Impregnated, surface set, PDC, electroplated |
| Core Diameter Range | BQ (36.5 mm) to PQ (85 mm) |
| Matrix Hardness | Series 4 (soft) to Series 10 (ultra-hard) |
| Diamond Quality | Premium synthetic & natural diamond blend |
| Diamond Concentration | 15 - 40 stones per carat (adjustable) |
| Waterway Design | Face discharge & conventional flush |
| Operating Speed | 800 - 2,500 RPM (formation dependent) |
| Bit Life | 50 - 500 m per bit (ground conditions) |
| Crown Height | 8 mm - 14 mm standard |
| Gauge Protection | Diamond-reinforced OD & ID gauge |

## DIMENSIONS & AVAILABLE SIZES

| Size | Core (mm) | Hole (mm) | Crown (mm) | Application |
|---|---|---|---|---|
| BQ | 36.5 | 59.9 | 8 | Soft formations |
| NQ | 47.6 | 75.7 | 10 | General exploration |
| HQ | 63.5 | 96.0 | 12 | Hard rock drilling |
| PQ | 85.0 | 122.6 | 14 | Large diameter |

## APPLICATIONS

- Mineral exploration in hard rock formations
- Geotechnical site investigation
- Coal & petroleum exploration drilling
- Construction material sampling
- Underground development drilling
- Directional drilling programs

## MATERIALS & CONSTRUCTION

- Matrix body: Tungsten carbide powder metallurgy
- Diamond segments: Premium synthetic industrial diamond
- Steel blank: Heat-treated alloy steel (4140)
- Gauge protection: Natural diamond inserts
- Waterways: Precision-machined fluid channels
- Thread connection: Case-hardened box thread

# DTH HAMMERS

High-Performance Down-The-Hole Hammers for Hard Rock Drilling

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Hammer Type | Valved & valveless designs |
| Operating Pressure | 5 - 30 bar (72 - 435 psi) |
| Air Consumption | 5 - 30 m³/min |
| Blow Frequency | 1,200 - 2,800 BPM |
| Bit Diameter Range | 3.5" to 12" (89 - 305 mm) |
| Impact Energy | 80 - 450 joules per blow |
| Thread Connection | API 2-3/8" to 4-1/2" IF |
| Weight Range | 15 - 180 kg |
| Drilling Depth | Up to 500 m+ |
| Noise Level | <115 dB at operator position |

## DIMENSIONS & AVAILABLE SIZES

| Model | Bit (mm) | Pressure | Air (m³/min) | Application |
|---|---|---|---|---|
| GM-3.5 | 89-105 | 10-18 bar | 6-12 | Blast holes |
| GM-4.5 | 105-130 | 12-21 bar | 10-18 | Production |
| GM-6 | 152-178 | 15-25 bar | 14-22 | Quarrying |
| GM-8 | 200-254 | 18-30 bar | 18-30 | Open pit mining |

## APPLICATIONS

- Open pit & underground mining operations
- Quarrying & aggregate production
- Water well drilling in hard rock
- Construction foundation piling
- Geothermal well development
- Blast hole drilling programs

## MATERIALS & CONSTRUCTION

- Piston: Precision-forged alloy steel, case-hardened
- Cylinder: High-tensile steel, internally honed
- Check valve: Tungsten carbide seat & ball
- Splines: Induction-hardened drive system
- Seals: Polyurethane high-pressure rated
- Surface treatment: Chrome plating on wear surfaces

# DTH DRILL BITS

Tungsten Carbide Button Bits for Maximum Penetration Rate

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Bit Type | Flat face, concave, convex, drop centre |
| Diameter Range | 3.5" to 12" (89 - 305 mm) |
| Button Material | Premium tungsten carbide (WC-Co) |
| Button Shape | Ballistic, spherical, semi-ballistic |
| Face Design | Optimised for soft, medium & hard rock |
| Flushing System | Central & front flushing channels |
| Thread Connection | Standard DTH hammer shanks |
| Gauge Protection | Carbide gauge buttons + hardfacing |
| Service Life | 500 - 5,000+ metres (formation dependent) |
| Drilling Medium | Hard rock, fractured ground, abrasive formations |

## DIMENSIONS & AVAILABLE SIZES

| Model | Dia (mm) | Buttons | Face Type | Application |
|---|---|---|---|---|
| GM-B89 | 89-105 | 8-12 | Flat/Concave | Soft rock |
| GM-B127 | 127-152 | 12-16 | Concave | Medium rock |
| GM-B203 | 203-254 | 16-20 | Drop centre | Hard rock |
| GM-B305 | 254-305 | 20-28 | Convex | Very hard rock |

## APPLICATIONS

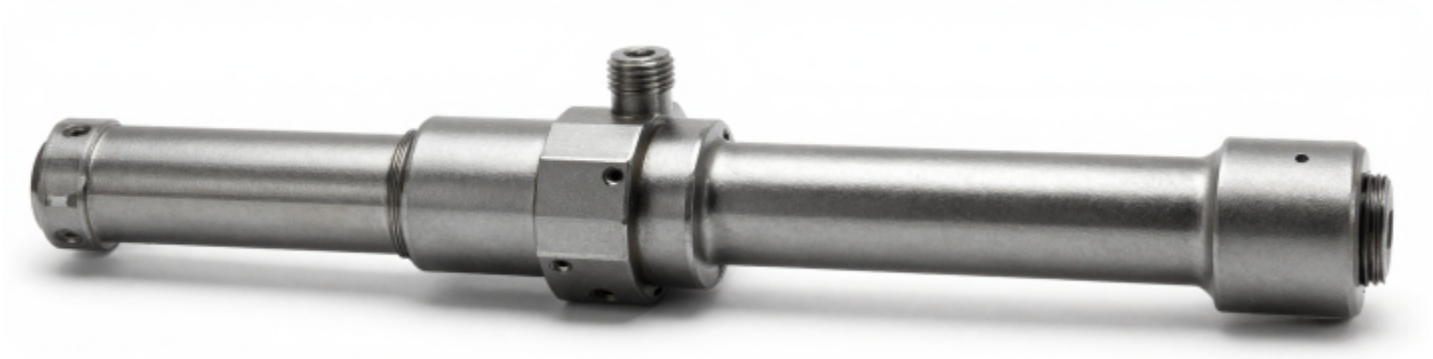
- Open pit mining blast hole drilling
- Water well drilling in hard formations
- Construction piling & anchoring
- Quarrying & dimension stone extraction
- Geothermal well development
- Infrastructure foundation drilling

## MATERIALS & CONSTRUCTION

- Buttons: Premium tungsten carbide (WC-8%Co)
- Bit body: High-strength alloy steel, heat-treated
- Gauge row: Carbide inserts + stellite hardfacing
- Flushing ports: Erosion-resistant carbide lined
- Shank: Induction-hardened spline connection
- Surface: Shot-peened for fatigue resistance

# RC HAMMERS

Reverse Circulation Hammers for High-Volume Sample Recovery



## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Hammer Type | Reverse circulation, dual-wall |
| Operating Pressure | 10 - 25 bar (145 - 362 psi) |
| Air Consumption | 15 - 50 m³/min |
| Blow Frequency | 1,000 - 2,200 BPM |
| Bit Diameter Range | 4.5" to 8" (114 - 203 mm) |
| Sample Recovery | >95% uncontaminated sample |
| Thread Connection | API 2-3/8" to 3-1/2" IF |
| Weight Range | 80 - 250 kg |
| Drilling Depth | Up to 600 m |
| Inner Tube Diameter | 70 - 130 mm |

## DIMENSIONS & AVAILABLE SIZES

| Model | Bit (mm) | Pressure | Air (m³/min) | Application |
|---|---|---|---|---|
| GM-RC4.5 | 114-133 | 12-18 bar | 15-25 | Exploration |
| GM-RC5.5 | 133-152 | 14-21 bar | 20-35 | Grade control |
| GM-RC6.5 | 152-178 | 16-24 bar | 28-42 | Production |
| GM-RC8 | 178-203 | 18-25 bar | 35-50 | Deep RC |

## APPLICATIONS

- Mineral exploration & grade control
- Resource definition drilling
- Geochemical sampling programs
- Water bore development
- Environmental site investigation
- Coal exploration & quality assessment

## MATERIALS & CONSTRUCTION

- Piston: Precision-forged alloy steel, nitrided
- Cylinder: Chrome-lined high-tensile steel
- Check valve: Tungsten carbide seat assembly
- Driver sub: Induction-hardened spline drive
- Seals: High-temperature polyurethane
- Wear surfaces: Hard chrome plating

# RC DRILL BITS

Precision-Engineered Bits for Reverse Circulation Drilling

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Bit Type | Face sampling, cross-over sub compatible |
| Diameter Range | 4.5" to 8" (114 - 203 mm) |
| Button Material | Premium tungsten carbide (WC-Co) |
| Button Configuration | Ballistic & semi-ballistic patterns |
| Sample Port | Central sample tube, 70-130 mm ID |
| Face Design | Concave & flat face options |
| Gauge Protection | Carbide gauge row + hardfacing |
| Shank Type | Splined drive, hammer-matched |
| Service Life | 800 - 4,000+ metres (formation dependent) |
| Flushing | Reverse circulation through centre |

## DIMENSIONS & AVAILABLE SIZES

| Model | Dia (mm) | Buttons | Face Type | Application |
|---|---|---|---|---|
| GM-RCB114 | 114-133 | 10-14 | Concave | Exploration |
| GM-RCB140 | 133-152 | 14-18 | Flat face | Grade control |
| GM-RCB165 | 152-178 | 16-22 | Concave | Production |
| GM-RCB200 | 178-203 | 20-26 | Drop centre | Deep RC |

## APPLICATIONS

- Mineral exploration & grade control
- Resource definition programs
- Geochemical sampling
- Water bore drilling
- Coal quality assessment
- Environmental site characterisation

## MATERIALS & CONSTRUCTION

- Buttons: Premium tungsten carbide (WC-8%Co)
- Bit body: High-strength alloy steel, heat-treated
- Gauge row: Carbide inserts + stellite overlay
- Sample tube: Erosion-resistant hardened steel
- Shank: Induction-hardened spline connection
- Surface: Shot-peened for fatigue resistance

# ROTARY DRILL BITS

Tricone, PDC & Drag Bits for All Formation Types

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Bit Types | Tricone, PDC (Polycrystalline Diamond Compact), Drag |
| Diameter Range | 4-3/4" to 26" (121 - 660 mm) |
| Cutter Material | Tungsten carbide inserts / synthetic diamond |
| Bearing Type | Sealed journal or roller bearing (Tricone) |
| Nozzle Configuration | Standard & extended nozzle options |
| IADC Classification | All codes: soft, medium, hard formations |
| Thread Connection | API Regular & IF pin connections |
| Operating RPM | 60 - 300 RPM (type dependent) |
| Weight on Bit | 2,000 - 60,000 lbs (formation dependent) |
| Hydraulics | Optimised junk slot & fluid course design |

## DIMENSIONS & AVAILABLE SIZES

| Model | Dia (in) | Type | Formation | Application |
|---|---|---|---|---|
| GM-TC6 | 6-1/4 | Tricone | Medium-Hard | Exploration |
| GM-PDC8 | 8-1/2 | PDC | Soft-Medium | Production |
| GM-TC12 | 12-1/4 | Tricone | Hard | Water well |
| GM-DRG6 | 6 | Drag | Soft | Shallow bore |

## APPLICATIONS

- Oil & gas exploration drilling
- Water well development
- Mining & blast hole drilling
- Geothermal energy projects
- Directional & horizontal drilling
- Construction piling & foundation work

## MATERIALS & CONSTRUCTION

- Cutters: Premium PDC or tungsten carbide inserts
- Body: Forged alloy steel or matrix body
- Bearings: Sealed precision roller/journal
- Gauge: Carbide inserts + hardfacing overlay
- Nozzles: Tungsten carbide venturi design
- Surface: Anti-balling coating available

# STABILIZERS

Precision Borehole Stabilization for Directional Control

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Type | Near-bit, string, integral blade, replaceable sleeve |
| Blade Configuration | Straight, spiral (single & double helix) |
| OD Range | 4-3/4" to 26" (121 - 660 mm) |
| Blade Count | 3 to 6 blades depending on application |
| Hardfacing | Tungsten carbide hardfacing on gauge pads |
| Connection | API Regular & IF box/pin |
| Material Grade | AISI 4145H / 4340 alloy steel |
| Gauge Tolerance | +0.000 / -0.030 inches |
| Flow Ports | Bypass ports for optimised hydraulics |
| Surface Treatment | Chrome plating or phosphate coating |

## DIMENSIONS & AVAILABLE SIZES

| Model | OD (in) | Blades | Type | Application |
|---|---|---|---|---|
| GM-STB6 | 6-1/4 | 3 | Spiral | Exploration |
| GM-STB8 | 8-1/2 | 4 | Integral | Directional |
| GM-STB12 | 12-1/4 | 3 | Replaceable | Production |
| GM-STB17 | 17-1/2 | 4 | Spiral | Casing |

## APPLICATIONS

- Directional drilling & well trajectory control
- Vertical hole stabilization
- Reaming & hole opening operations
- Rotary steerable system support
- Casing-while-drilling assemblies
- Horizontal & extended reach wells

## MATERIALS & CONSTRUCTION

- Body: AISI 4145H modified alloy steel
- Blades: Integral forged or welded construction
- Hardfacing: Crushed tungsten carbide matrix
- Gauge pads: Diamond-enhanced inserts available
- Connections: Induction-hardened threads
- Coating: Hard chrome or manganese phosphate

# HYDRAULIC POWER PACKS

High-Performance Power Units for Industrial & Mobile Applications

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Drive Type | Electric motor, diesel engine, or PTO driven |
| Power Range | 5.5 - 250 kW (7.5 - 335 HP) |
| Operating Pressure | Up to 350 bar (5,000 psi) |
| Flow Rate | 10 - 500 L/min |
| Reservoir Capacity | 50 - 2,000 litres |
| Cooling System | Air-cooled or water-cooled heat exchangers |
| Filtration | Return line, pressure line & suction filters |
| Control System | Manual, solenoid, or PLC-integrated |
| Voltage Options | 380-415V / 50Hz, 440-480V / 60Hz |
| Protection Rating | IP55 / IP65 enclosure options |

## DIMENSIONS & AVAILABLE SIZES

| Model | Power (kW) | Flow (L/min) | Pressure | Application |
|---|---|---|---|---|
| GM-HPU15 | 15 | 40-60 | 250 bar | Workshop |
| GM-HPU45 | 45 | 80-120 | 315 bar | Drilling |
| GM-HPU90 | 90 | 150-250 | 350 bar | Heavy industry |
| GM-HPU250 | 250 | 350-500 | 350 bar | Offshore |

## APPLICATIONS

- Drilling rig hydraulic systems
- Industrial press & forming machines
- Marine & offshore deck equipment
- Construction & tunnelling machinery
- Material handling & lifting systems
- Test bench & simulation rigs

## MATERIALS & CONSTRUCTION

- Reservoir: Fabricated steel with internal baffles
- Manifold: Ductile iron or aluminium alloy
- Piping: Seamless hydraulic steel tubing
- Fittings: SAE / BSP / JIC standards
- Seals: Nitrile (NBR) & Viton (FKM)
- Frame: Powder-coated structural steel

# HYDRAULIC CYLINDERS

Heavy-Duty Cylinders for Industrial & Mobile Hydraulic Systems

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Cylinder Type | Single-acting, double-acting, telescopic |
| Bore Diameter | 25 - 500 mm |
| Rod Diameter | 16 - 350 mm |
| Stroke Length | Up to 6,000 mm |
| Operating Pressure | Up to 350 bar (5,000 psi) |
| Mounting Style | Flange, clevis, trunnion, foot mount |
| Cushioning | Adjustable end-of-stroke cushions |
| Seal System | Multi-lip piston seals, wiper & rod seals |
| Surface Finish | Hard chrome plated rod, honed bore |
| Temperature Range | -20 to +80 deg C standard |

## DIMENSIONS & AVAILABLE SIZES

| Model | Bore (mm) | Rod (mm) | Pressure | Application |
|---|---|---|---|---|
| GM-HC50 | 50 | 30 | 250 bar | Light duty |
| GM-HC100 | 100 | 70 | 300 bar | Mobile |
| GM-HC200 | 200 | 140 | 350 bar | Industrial |
| GM-HC500 | 500 | 350 | 350 bar | Heavy press |

## APPLICATIONS

- Drilling rig mast raise & pullback
- Press & forming equipment
- Construction & earthmoving machinery
- Marine steering & stabilisation
- Material handling & lifting
- Dam gates & sluice control

## MATERIALS & CONSTRUCTION

- Barrel: Seamless honed steel tube (ST52)
- Rod: Induction-hardened, hard chrome plated
- Piston: Ductile iron or forged steel
- Seals: Polyurethane, NBR & PTFE compounds
- End caps: Forged steel, stress-relieved
- Ports: SAE / BSP / metric thread options

# HYDRAULIC PUMPS & MOTORS

Precision Fluid Power Components for Demanding Applications

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Pump Types | Gear, vane, axial piston, radial piston |
| Displacement Range | 0.5 - 500 cc/rev |
| Operating Pressure | Up to 450 bar (6,500 psi) |
| Speed Range | 500 - 4,000 RPM (pump), 10 - 1,000 RPM (motor) |
| Efficiency | Up to 95% volumetric efficiency |
| Control Type | Fixed & variable displacement options |
| Shaft Configuration | Keyed, splined, SAE A/B/C/D flanges |
| Fluid Compatibility | Mineral oil, synthetic, biodegradable fluids |
| Noise Level | Low-noise designs available (<72 dB) |
| Temperature Range | -25 to +90 deg C continuous |

## DIMENSIONS & AVAILABLE SIZES

| Model | Displ (cc) | Pressure | Type | Application |
|---|---|---|---|---|
| GM-GP20 | 20 | 250 bar | Gear | Auxiliary |
| GM-AP80 | 80 | 350 bar | Axial piston | Main drive |
| GM-AP250 | 250 | 450 bar | Axial piston | Heavy duty |
| GM-HM500 | 500 | 350 bar | Radial piston | Track drive |

## APPLICATIONS

- Drilling rig rotary & feed systems
- Mobile equipment propulsion
- Industrial press & injection moulding
- Winch & crane drive systems
- Marine deck machinery
- Conveyor & mixer drives

## MATERIALS & CONSTRUCTION

- Housing: High-grade cast iron or aluminium
- Gears/Pistons: Case-hardened alloy steel
- Bearings: Precision roller & plain bearings
- Shafts: Induction-hardened, ground finish
- Seals: FKM (Viton) & PTFE compounds
- Ports: SAE / BSP / metric connections

# HYDRAULIC VALVES

Precision Flow Control for Industrial Hydraulic Systems

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Valve Types | Directional, pressure, flow control, proportional |
| Operating Pressure | Up to 350 bar (5,000 psi) |
| Flow Capacity | Up to 600 L/min |
| Actuation | Manual, solenoid, hydraulic pilot, proportional |
| Mounting Pattern | CETOP 3, 5, 7, 8, 10 (ISO 4401) |
| Spool Configuration | 2/2, 3/2, 4/2, 4/3 with multiple centre options |
| Response Time | < 25 ms (solenoid), < 10 ms (proportional) |
| Voltage Options | 12V DC, 24V DC, 110V AC, 220V AC |
| Seal Material | NBR, FKM (Viton), PTFE compounds |
| Temperature Range | -20 to +80 deg C standard operation |

## DIMENSIONS & AVAILABLE SIZES

| Model | Flow (L/min) | Pressure | Type | Application |
|---|---|---|---|---|
| GM-DCV03 | 40 | 315 bar | Directional | Mobile |
| GM-PRV05 | 80 | 350 bar | Pressure relief | Industrial |
| GM-FCV07 | 200 | 315 bar | Flow control | Press systems |
| GM-PVL10 | 600 | 350 bar | Proportional | Servo systems |

## APPLICATIONS

- Drilling rig hydraulic control circuits
- Industrial press & forming systems
- Mobile equipment steering & braking
- Marine & offshore deck machinery
- Injection moulding machines
- Test rigs & simulation systems

## MATERIALS & CONSTRUCTION

- Body: High-grade ductile iron or steel
- Spool: Hardened & ground alloy steel
- Springs: Chrome silicon or music wire
- Seals: NBR / FKM / PTFE compounds
- Solenoids: Class H insulation, wet-pin
- Surface: Zinc plating or anodised finish

# INDUSTRIAL FABRICATION SOLUTIONS

Custom Steel Fabrication & Precision Manufacturing Services

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Services | Structural, mechanical, piping & plate fabrication |
| Material Capacity | Carbon steel, stainless, aluminium, duplex |
| Plate Thickness | 1 - 150 mm |
| Welding Processes | MIG, TIG, SMAW, FCAW, SAW |
| Cutting Methods | CNC plasma, oxy-fuel, laser, waterjet |
| Rolling Capacity | Up to 50 mm x 3,000 mm wide |
| Machining | CNC turning, milling, boring, drilling |
| Quality Standards | ISO 9001, ISO 3834, AWS D1.1 |
| NDT Capabilities | UT, MT, PT, RT inspection |
| Surface Treatment | Shot blasting, painting, galvanising, powder coating |

## DIMENSIONS & AVAILABLE SIZES

| Model | Capacity | Material | Process | Application |
|---|---|---|---|---|
| GM-FAB-S | Up to 20T | Carbon steel | Structural | Platforms |
| GM-FAB-P | Up to 50T | CS / SS | Piping | Process plant |
| GM-FAB-V | Up to 100T | Alloy steel | Vessel fab | Oil & gas |
| GM-FAB-M | Custom | Multi-alloy | Machining | Precision |

## APPLICATIONS

- Oil & gas platform structures & modules
- Pressure vessels & heat exchangers
- Mining equipment frames & components
- Water treatment plant steelwork
- Industrial piping spools & manifolds
- Custom machinery & equipment bases

## MATERIALS & CONSTRUCTION

- Structural steel: S275, S355, S460 grades
- Stainless: 304, 316L, duplex 2205
- Pipe: API 5L, ASTM A106, A312
- Plate: ASTM A516 Gr.70, A387
- Fittings: ASME B16.9, B16.11 rated
- Fasteners: ASTM A193 B7, A194 2H

# ENVIRONMENTAL ENGINEERING SOLUTIONS

Sustainable Solutions for Environmental Remediation & Protection

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Services | Remediation, water treatment, waste management |
| Treatment Capacity | 10 - 10,000 m3/day |
| Contaminant Types | Hydrocarbons, heavy metals, VOCs, suspended solids |
| Treatment Methods | Physical, chemical, biological & thermal |
| Discharge Standards | UAE FEA, EPA, EU Water Framework Directive |
| Monitoring | Real-time SCADA & remote telemetry |
| Containment | Bunded areas, lined lagoons, sealed tanks |
| Air Quality | Scrubbers, carbon adsorption, biofilters |
| Compliance | ISO 14001 certified management systems |
| Reporting | Environmental impact assessments & audits |

## DIMENSIONS & AVAILABLE SIZES

| Model | Capacity | Method | Standard | Application |
|---|---|---|---|---|
| GM-ENV-W | 500 m3/day | Physical | FEA | Water treatment |
| GM-ENV-S | 1,000 T | Thermal | EPA | Soil remediation |
| GM-ENV-A | 5,000 m3/hr | Chemical | EU WFD | Air quality |
| GM-ENV-R | 10,000 m3/d | Biological | ISO 14001 | Full remediation |

## APPLICATIONS

- Produced water treatment & reinjection
- Contaminated land remediation
- Industrial wastewater treatment plants
- Drilling waste management & disposal
- Air emission control systems
- Environmental monitoring & compliance

## MATERIALS & CONSTRUCTION

- Tanks: GRP, HDPE lined steel, stainless steel
- Media: Activated carbon, ion exchange resins
- Membranes: UF, NF, RO polymer membranes
- Piping: HDPE, PVC, SS316L process piping
- Instrumentation: IP67 rated field devices
- Controls: PLC/SCADA with remote access

# SPARE PARTS & ACCESSORIES

Genuine Replacement Parts for Maximum Equipment Uptime

## TECHNICAL SPECIFICATIONS

| Parameter | Specification |
|---|---|
| Product Range | Drill bits, rods, subs, swivels, pumps, seals, bearings |
| Compatibility | OEM & aftermarket for all major rig brands |
| Quality Assurance | ISO 9001 certified, full traceability |
| Inventory | 5,000+ SKUs stocked in Abu Dhabi warehouse |
| Lead Time | Ex-stock to 4 weeks for custom items |
| Packaging | Export-grade packaging, VCI protection |
| Warranty | 12-month manufacturer warranty |
| Certification | Material test reports & certificates of conformity |
| Logistics | Global shipping, DDP/DAP terms available |
| Support | Technical support & cross-reference service |

## DIMENSIONS & AVAILABLE SIZES

| Model | Category | Items | Brands | Stock |
|---|---|---|---|---|
| Drill Consumables | Bits, rods, subs | Sandvik, Boart | Ex-stock | All rigs |
| Hydraulic Parts | Seals, pumps | Parker, Rexroth | Ex-stock | Universal |
| Engine Parts | Filters, belts | Cummins, CAT | 2-4 weeks | Diesel rigs |
| Safety & PPE | Full range | 3M, MSA | Ex-stock | All sites |

## APPLICATIONS

- Drilling rig maintenance & overhaul
- Scheduled preventive maintenance programs
- Emergency breakdown support
- Fleet standardisation & upgrades
- Remote site consumable supply
- Project-based bulk procurement

## MATERIALS & CONSTRUCTION

- Seals: Genuine OEM polyurethane & Viton
- Bearings: SKF, FAG, Timken premium grade
- Fasteners: Grade 8.8 / 10.9 high-tensile
- Hoses: R1, R2, 4SP rated hydraulic hose
- Filters: OEM-spec cellulose & synthetic media
- Wear parts: Tungsten carbide & chrome alloy

# GEOMAT

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