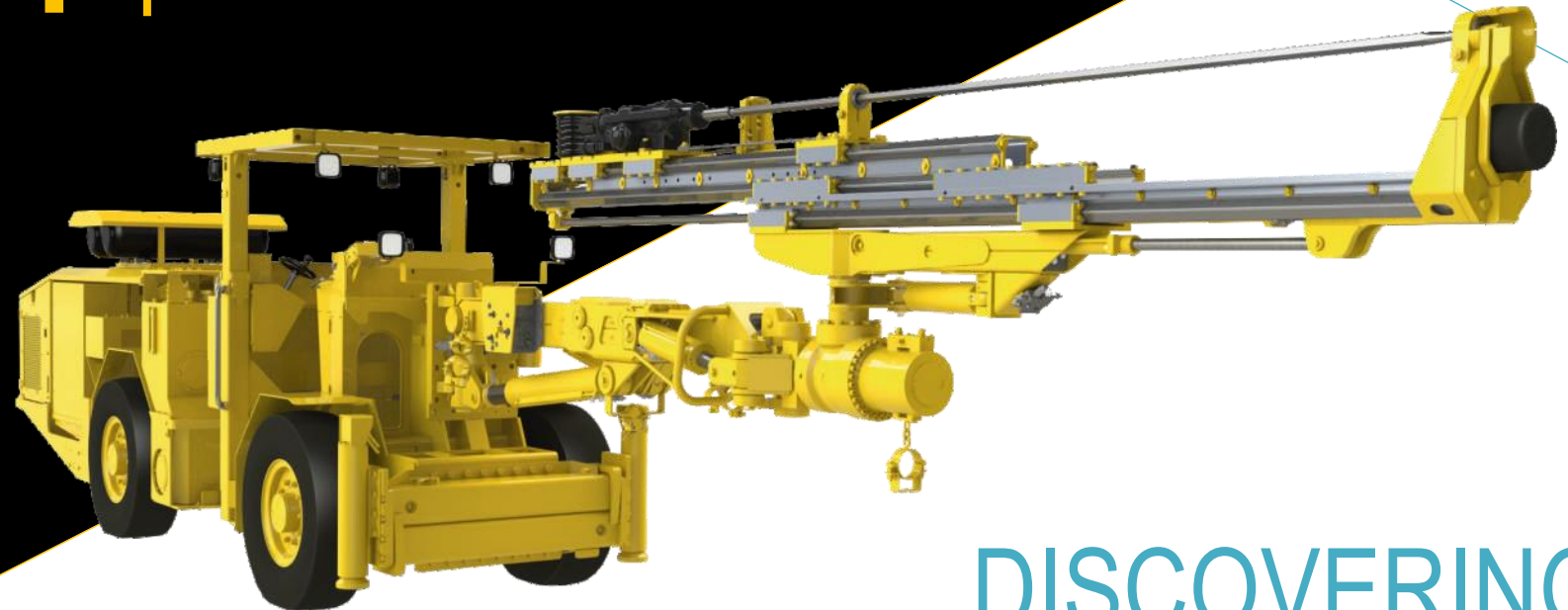


DF-B1

UNDERGROUND FACE
DRILL RIG



DISCOVERING
NEW
HORIZONS

ABOUT US

▶ JSC "MBH" is a leading company in the development and manufacturing of rock drilling tools and mining equipment in Russia.

2020

Manufacturing Facility
Employees
Commodity

22 000 m2
over 500 people
over 600 units

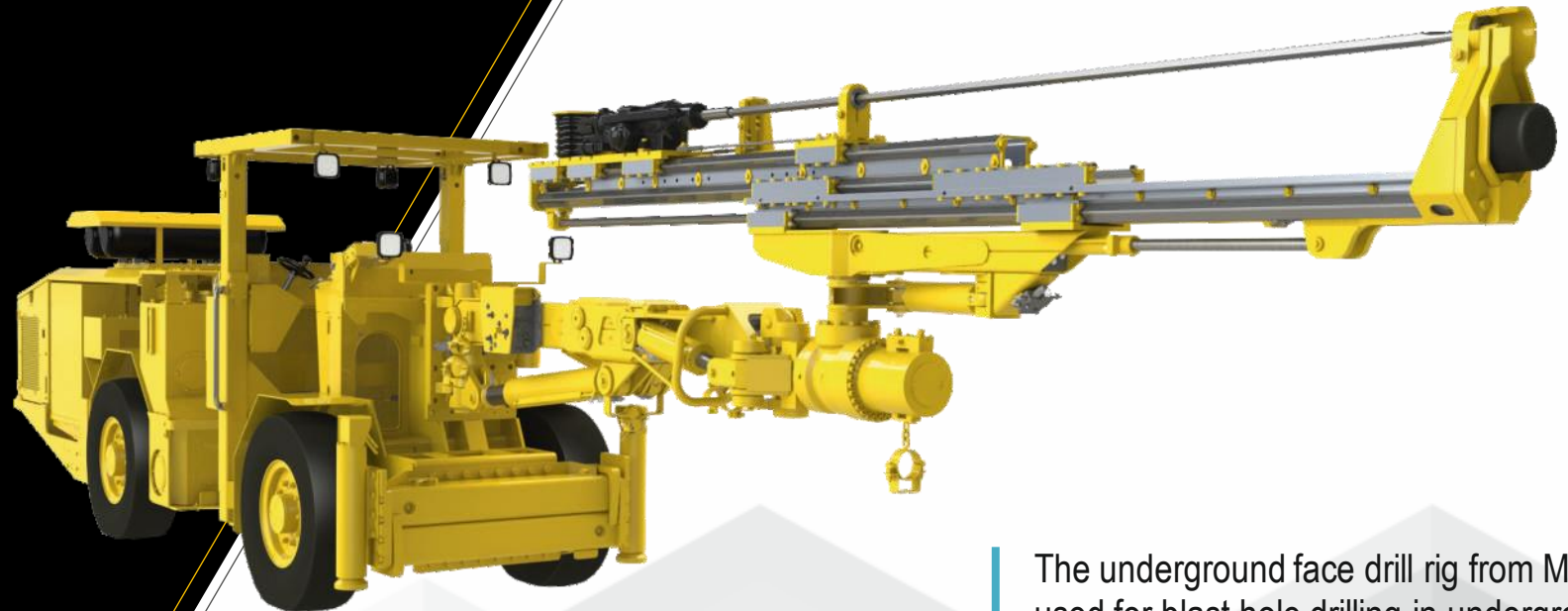
2004

Manufacturing Facility
Employees
Commodity

2 000 m2
50 people
5 units

TECHNICAL SPECIFICATION

DF-B1



The underground face drill rig is designed for drilling horizontal, vertical and inclined boreholes.

The underground face drill rig from MBH are used for blast hole drilling in underground mining and tunneling. The rig are covering cross sections up to 40 m².

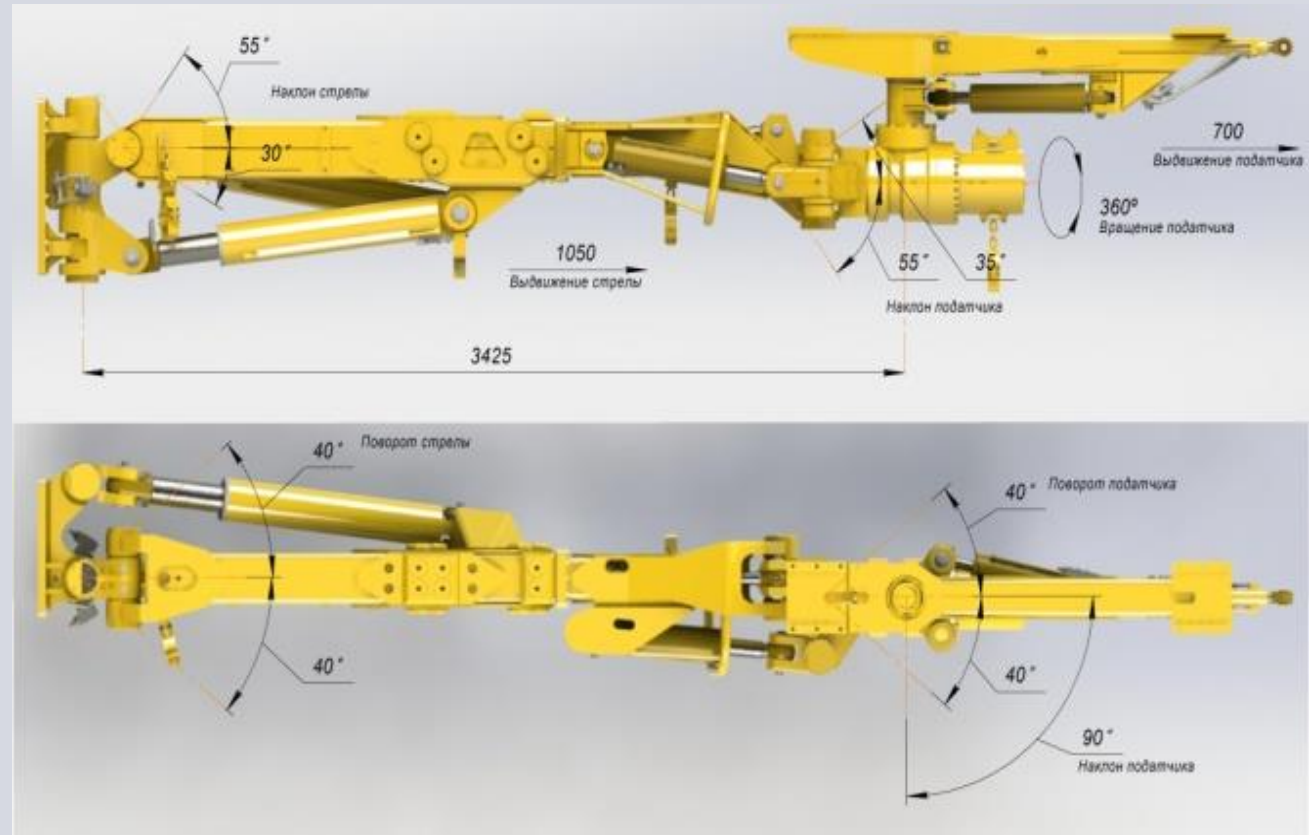
The drill rig are equipped for bolting application.

MODULES DF-B1

DRILLING MODULE BOOM



МАШИНОСТРОИТЕЛЬНЫЙ
ХОЛДИНГ



Drilling cross sections

Parallelism

Boom Weight

Boom extension

Boom lift

Boom swing

Feeder incline

Feeder tilt

Reversing the feeder (for questionnaire))

Rotation angle

40 m2

Автоматическая гидравлическая

2100 kg

1050 mm

+55° / -30°

±40°

+35° / -55°

±40°

90°

360°

The telescopic boom with a swivel head allows to carry out work in the transverse and vertical directions, expanding the operational possibilities of the installation.

Fully automatic parallel movement of the feeder in the horizontal and vertical planes during boom manipulation ensures fast and accurate positioning of the feeder for drilling a borehole.

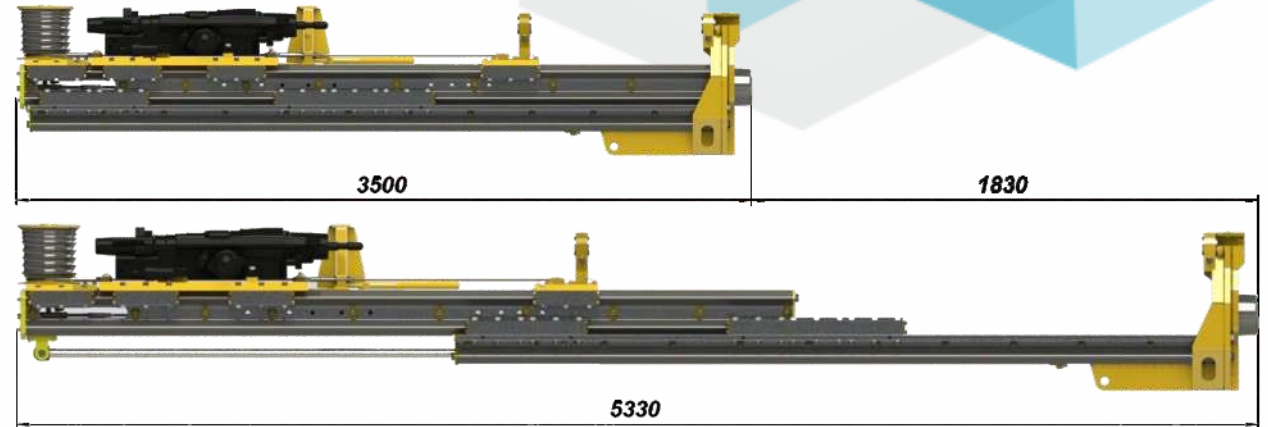
MODULES DF-B1

DRILLING MODULE FEEDER



МАШИНОСТРОИТЕЛЬНЫЙ
ХОЛДИНГ

Type	Telescopic
Feed drive	Hydraulic cylinder
Feed force	25 кН
Length of rods	6,8,10,12 fit
Total Length	3500 / 5330 mm
Borehole depth	1590 / 3420 mm
Length of rods	1870 / 3700 mm
Weight	600 kg



- The telescopic feeder allows to use of drill rods of various standard sizes from 6 to 12 feet, expanding the technical capabilities of the installation of drilling holes and depths variations, directions and purposes.
- The hydraulic drive of the feeder extension ensures stepless adjustment of its length when adjusting to the required standard size of the booms.
- Modern aluminum alloy feeder profile with rails
- stainless steel for increased durability in harsh environments.
- High drilling accuracy due to constant rod centering in two lunettes.
- Quick relies stainless steel guides extend the life of the feeder.
- By the customer request, an extended feeder can be installed, which will allow drilling boreholes up to 4600 mm.
- The compact feeder size of the (3.5 m) will allow you to drill anchor holes in the vertical plane.
- The hydraulic feeder extension drives quick adjustment of its length when adjusting to the required standard size of the rods.
- Depending on the design of the rod (hexagonal or round), steel or polyurethane bushings are used, which increases the life of the rods.

MODULES DF-B1

DRILLING MODULE HYDRAULIC ROCK DRILL



МАШИНОСТРОИТЕЛЬНЫЙ
ХОЛДИНГ

The possibility of installation with modern hydraulic rock drills from several leading world manufacturers provide to the consumer with a choice of accordance with his preferences and geological conditions.

Well known



Atlas Copco COP 1838+
(Sweden)

T38
43 - 76 mm
18 kW
60 Hz
440 - 1000 H*м
370 rpm
174 kg

Heavy duty



Montabert HC 110 CA
(France)

T38
43 - 64 mm
21 kW
67 Hz
557 - 1092 H*м
290 rpm
200 kg

Optimal price



Doofor DF560L
(Finland)

T38
43 - 89 mm
20 kW
67 Hz
503 - 1170 H*м
250 rpm
152 kg

Shank
Borehole diameter
Impact power
Tourg, max
Rotation Speed, max
Weight

Standard supply COP1838+

MODULES

DF-B1

CHASSIS



Diesel engine	Deutz BF4M2011, Tier2.
Speed	incline 0°-12 km/h Incline 8°-5 km/h Incline 15°-2 km/h
Overcome slope	15°
Folding angle half-frames Rear	40°
axle swing angle	8°
Clearance	320 mm
Transmission	Hydrostatic
Drivetrain	Dana 112
Tires	12.00-20
Hand and emergency brake	Spring disc hydraulic oil bath release
Brake	Hydrostatic self-locking
Hydraulic system release	Manual pump
Front sliding hydraulic jacks	2
Rear hydraulic jacks	2
Fuel tank capacity	80 L
Muffler/ Catalytic converter	
Electrical system	24 B
Battery	2x70 Ah2x50 W LED+2x70 W (24 V)
Head light (combined)	2x70W (24 V)
Rear light	

Унифицированная ходовая часть обеспечивает возможность взаимозаменяемости агрегатов между установками различного типа и назначения.

Обеспечивает высокую мобильность, проходимость и минимальный радиус поворота установки.

MODULES DF-B1

TRANSMISSION

The automatic continuously variable hydrostatic transmission and hydraulic steering ensure low operating costs and high performance. В трансмиссии применены узлы и агрегаты известных производителей.

Dana Spicer is a world leader in reliable transmissions, axles and gearboxes.

Bosch Rexroth – world leader in hydraulics, control systems and drive technology.



Drivetrain
Tires
Hand and emergency brake
Brake
Transfer case

Dana 112
12.00 – 20 L5
Spring-loaded disc hydraulic release in oil bath
Hydrostatic self-locking
Dana 311



Transmission type	Hydrostatic
Speed	
Incline 0°	12 km/h
Incline 8°	5 km/h
Incline 15°	2 km/h
Clearance	320 mm

MODULES DF-B1

HYDRAULIC SYSTEM

Dual-circuit hydraulic system :

- the first circuit for the hydrostatic transmission of the chassis (diesel engine).
- second circuit for performing auxiliary operations (diesel or electric engine):
- leveling;
- precise positioning of the feeder to borehole;
- cable winding.
- **Drilling process**
- shunting feed;
- Rock drill assistance.

Electro-hydraulic power unit	55 kW
Tank capacity (drilling)	180 л
Tank capacity (drive)	55 л
Tank filling method	Manual pump
Optional tank filling	Electric pump
Oil cooling (drilling)	Water
Oil cooling (moving)	Electric, pneumatic



Advantages:

- This method allows you to unify the running gear to use on various types and purposes;
- The built-in anti-jamming function of drill rods is applied;
- Compact valve blocks significantly reduce the number of high pressure hoses;
- Direct hydraulic control with anti-shock protection provides high reliability, safety and maintainability.

MODULES

DF-B1

OPERATOR CAB

Cab



Protection screen



Hydraulic control panel



Drive control



Electrical Control panel



The hydraulic lowering operator's protection screen meets FOPS / ROPS requirements and provides a minimum transport clearance for the unit when rolling back.

The visor shield provides additional protection for the operator from falling objects.

The operator's seat is equipped with an ergonomic seat and all necessary adjustments and seat belts.

MODULES DF-B1

LUBRICATION SYSTEM



The lubrication system of the drill rig designed by "Beka" company (Germany). The "Beka" has extensive experience and offers special solutions for mobile equipment, machines and plants used in the mining industry.



Carrier lubrication system- centralized- automatic.

Hydraulic rock drill lubrication system– pump forced with a pneumatic drive.

Boom lubrication system

- Reduced wear off on bearings, rims, bushings and other parts.
- Reducing maintenance cost and repair.
- Improving equipment operational reliability.
- Reduced downtime.
- Significant time savings for service personnel (compared to manual lubrication).
- Minimizing the "human factor" while controlling inconvenient and difficult lubrication points.
- Reducing the lubricant consumption amount (up to 70%).
- Reducing the impact on the environment, due to efficiency and the absence of oil products leaks.

MODULES DF-B1

FLUSHING SYSTEM



Standard set.

Function - borehole flushing while drilling.
Using mine water network.

Booster water pump

Productivity	50 l/min
Minimum intake water pressure	2 bar
Water Pressure (outgoing)	12 - 15 bar
Empty tank protection	

Flush System- optional set

Function– dust suppression while drilling a borehole.
Using a self-contained water tank.

Booster water pump

Productivity	10 l/min
Minimum intake water pressure	2 bar
Water Pressure (outgoing)	12 - 15 bar
Empty tank protection	

Maximum capacity- 700 liters

Ability to drill without connectivity to the mine water system.

Reliable filtration allow to use muddy water.

The tank capacity is enough for drilling one face.

MODULES DF-B1

AIR SYSTEM



GARDNER DENVER GROUP – The Gardner Denver Industrials Group is one of the oldest, leading providers of air compression and vacuum products.

Tamrotor Tamrotor offers compressed air solutions for various applications, for example rock drilling, industrial and portable air compressor solutions, vehicle and mobile applications, oil drilling and firefighting equipment.



Air receivers are used for sustainable compressor operation .

Standart:

Air compressor performance 1 m³/min.

Function :

- Shank lubrication
- borehole flushing;

Performance	1 m ³ /min
Air pressure	7 bar

Option:

Heavy duty compressor with two air receivers.

Function :

- borehole flushing;
- Shank lubrication;
- connection of additional pneumatic equipment (borehole charging)

Performance, max	3,3 m ³ /min
Air pressure	8 - 13 bar
Air receiver	200 liters

MODULES DF-B1

ELECTRICAL SYSTEM

Contained:

- Power grid;
- Industrial automation management system

The unit is driven by a diesel-hydraulic drive, electricity supply from a generator installed on a diesel engine, voltage 24 V.



The drilling operations use an electrohydraulic drive connected to the mine electric network 380V.

Total power	65 kW
Voltage	380 – 360 V
Frequency	50 HZ
Dust and moisture protection (not less than)	IP 65
Start method	Direct
Start method (option)	Star/triangle
Automatic cable reel	
Overload protection	
Phase sequence control	
Counter drilled hours	
Automatic battery charging	

MODULES DF-B1

ELECTRICAL SYSTEM

Features:

The RS485 interface port (ModBus protocol) allows information to be transmitted from drill rig to the upper level of the Industrial automation via Wi-Fi. The system implements the possibility of remote monitoring and alarm in case of failure of any module.



A COMPREHENSIVE SERVICE OFFERING



Maintenance service at the site of consumer
+ spare parts stock
+ drilling consumables stock

KEY CUSTOMERS



COMPREHENSIVE SOLUTION

Embedded supply of rock drilling tools in conjunction with DF-B1





THANK YOU FOR
ATTENTION!

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