

HMK460MG

MOTOR GRADER



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MG460

YOUR RELIABLE PARTNER!

Hidromek proudly introduces the Hidromek Motor Grader Models MG460 of which durability and performance are well proven in wide range of markets.

Built to handle almost any job—precision finishing, scarifying, bank-cutting, ditch working.

The clean and powerful turbo-charged diesel engine has been adopted for the MG460, ensuring reliable work under the toughest conditions.

Dual independent braking systems mean that the MG460 Motor Graders can be brought to an immediate stop at any time, while the cab is designed with full attention to operators' needs.





Engine to Meet Tough Needs

Direct-injection, turbo-charged Mitsubishi 6D24-T engine offers superior output and high torque levels. This powerful engine, known for its low fuel consumption, low emission, and reliability, packs a powerful 116 kW(155 HP) to 138kW(185 HP) / 2000 rpm variable horse power output, ensuring that the MG460 always give outstanding performance under any conditions, from light to heavy duty work.

Variable horse power (VHP) provides an overall 11% increase in machine performance. MG460's engines also feature easy starting, and outstanding durability.

Hydraulics

MG460 hydraulic system adopts a large capacity variable displacement pump with a close center load sensing system. The hydraulic system provides high implement speed with multi-function.

A large capacity return line filter and magnetic suction strainer ensure the hydraulic oil cleanliness is at a Premium.

The hydraulic system incorporates lock valves on the blade lift, blade tilt wheel lean, rear ripper and scarifier as an option.

Differential Lock / Unlock

The differential lock/unlock features, optional on MG460, improving performance during turning or when operating on rough underfoot conditions. The easy-to-operate lock/unlock switch is located on the front console.



Direct Power Shift (DPS) Transmission

The direct drive planetary gear transmission, which was developed especially for the MG460, is designed to match the high performance 6D24-T diesel engine for optimum efficiency. This transmission eliminates momentum loss by enabling immediate engagement of any of the MG460's 8 forward or reverse gears without using the clutch.

By this perfect combination with the engine and DPS transmission, MG460 provides maximum travel and working speeds with optimum drawbar pull.



MG460 Offers Maximum Productivity and Durability

Moldboard (Blade)

Equipped as optional with a tip cylinder, the blade has excellent rolling performance, which allows a variety of operations, ranging from levelling sand to mixing, dozing and digging everything or snow and ice removal.

Cutting edges and endbits are available to maintain maximum service life.

In-Seat Bank-Cut Operations

The adoption of in-seat bank-cut system makes it possible to control the position of the blade from the cab. This ensures a wider range of applications from fine finishing through bank cutting. The machine can be set to cut 90 degrees left or right.



Frame Structure (High Strength Main Frame)

The computer simulations and actual field tests were used to develop the MG460's high strength main frame. The design eliminates stress points for increased durability and long life.

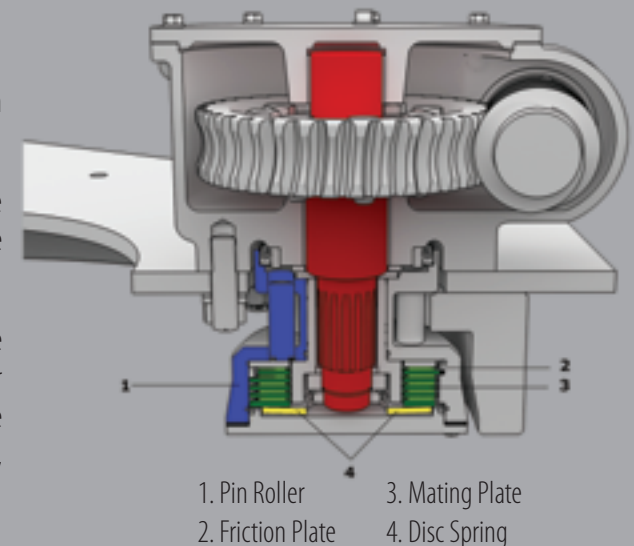
The MG460's feature strong durable main frame developed using the latest design and materials' technology and proven using computer simulation tests.

Blade-Slip Clutch

The MG460 feature an optional blade-slip clutch, an alternative clutch protection system to the conventional shear-pin mechanism.

The MG460's clutch may slip when an abnormally strong external force is exerted on the blade, to give full protection against destructive overloading.

The main advantages of the blade-slip clutch over the shear-pin type mechanism include the elimination of replacement parts, such as shear pin, and the time and expense needed for maintenance. Please note that the blade rotating torque can be set for optimum performance, contributing to greater working efficiency.



1. Pin Roller
2. Friction Plate
3. Mating Plate
4. Disc Spring

OPERATOR COMFORT



Wide Visibility

MG460 series motor graders optional operator cab has been designed to offer a wide range of visibility to the operator for a better, safer and more comfortable operation.



Adjustable Operator Seat

ROPS and FOPS certificated cab offers a safe and comfortable working environment to the operators. The deluxe suspension seat offers wide ranging adjustments which allows the operator to choose the best sitting position.



Hydraulic Operating Levers

MG460 motor grader is available to fit with "Industry Standard" soft touch, short stroke levers which are direct coupled by control cable to the hydraulic control valves. The system provides precise implement control with minimum stress to the operator.



Transmission Shift Lever

The transmission shift lever allows operator to select the optimal combination of machine speed and drawbar pull from among eight forward and eight reverse speeds, improving operating efficiency in a variety of operations. The transmission lever requires little effort to adjust, ensuring superb operating smoothness.





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SERVICE AND MAINTENANCE

Designed for easy operation, the locking engine compartment side cover incorporates a one-touch gas damper. In addition to opening easily, the cover is large enough to provide easy access to all engine components and facilitate oil, battery fluid level and other daily checks. Filters also located to be changed easily.

The fuel cap is located to the side of the engine compartment so that it can be refilled easily from the ground level.

The fuse box is positioned to the right of the operator's seat for easy access.

The service hour meter is located on the left side of the steering console so that it can be checked from the ground level without entering the cab.

Air supply system is a standard equipment for MG460, which can be used as an air source to inflate tires by using an optional tire charge hose.

Quick, straightforward inspections also allow operators to monitor vehicle status closely, so that MG460 maintenance is almost always preventive.



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SAFETY FIRST!

The engine can only be started when the transmission lever is in the neutral position.

A warning buzzer sounds to alert the operator if the transmission shift lever is operated while the parking brake remains engaged.

If air pressure is insufficient to power the service brakes, an alarm buzzer sounds until pressure is recharged.

In case of engine overheating, an alarm buzzer sounds to indicate. If this warning is ignored, the engine will eventually shut off itself.

Emergency steering system is an optional feature for MG460.

ROPS/FOPS Cab

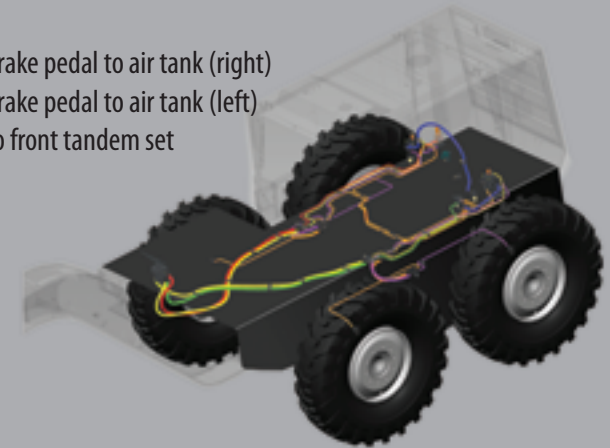
ROPS/FOPS Cab provides low sound and low vibration. Noise levels are below industry standards due to the acoustic design of the cabin. All round work site vision from the operator platform is unrestricted with blade (moldboard) and rear implement (ripper) vision being exceptional due to the large one piece front and rear windscreens. All windows are tinted as standard.

To minimize the amount of noise and vibration that reaches to operator, the cabin and engine compartment are fully separated. Also, the engine compartment uses double-layer soundproofing on the cabin side and the cabin is rubber-mounted.

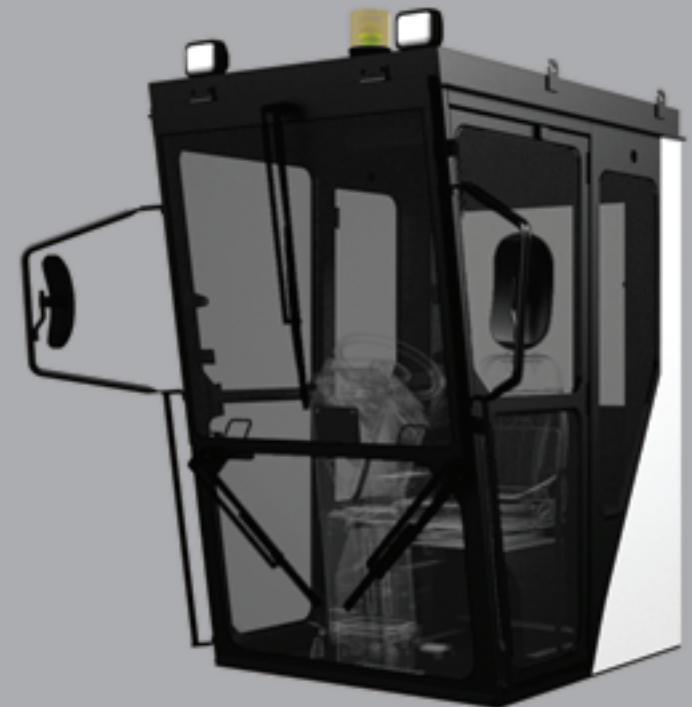
Fail-Safe Braking System

Two completely independent air-actuated oil-cooled disc brake systems provide on demand positive braking with only a light touch of the pedal which ensure that braking is instantaneous, noiseless and, most important, fail-safe. Duplicate back-up air circuits give operators complete control even in the case of a system malfunction.

- Brake pedal to air tank (right)
- Brake pedal to air tank (left)
- To front tandem set



- To rear tandem set
- Brake pedal to relay valve
- Compressor to air tank





ATTACHMENTS

Moldboard (Blade)

Equipped as optional with a tip cylinder, the blade has excellent rolling performance, which allows a variety of operations, ranging from levelling sand to mixing, dozing and digging everything or snow and ice removal. Cutting edges and endbits are available to maintain maximum service life.

In-Seat Bank-Cut Operations

The adoption of in-seat bank-cut system makes it possible to control the position of the blade from the cab. This ensures a wider range of applications from fine finishing through bank cutting. The machine can be set to cut 90 degrees left or right.

Midmounted Scarifier

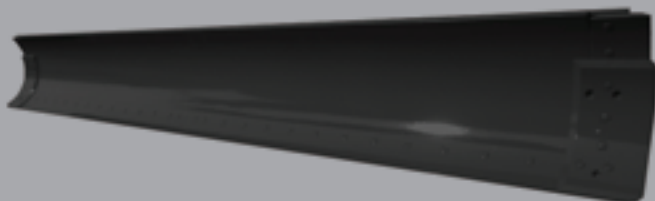
Midmounted scarifier oriented between front axle and blade. Scarifier includes 11 teeth.

Front Mounted Attachments

Push plate/counterweight, front blade are available to attach on machine as optional.

Rear Ripper

Rear ripper includes 3 shanks and also 5 shanks are available.



ENGINE

Model	Mitsubishi 6D24-T
Type	4 cycle, Turbo-charged, Direct-injection, water cooled, diesel engine
No. of cylinder - bore x stroke	In-line 6 cylinders - 130 mm x 150 mm
Piston displacement	11.946 cc
Emission Level	Compatible with USA EPA Tier 1 and European
Performance (EC regulation 97/68/EC)	
in 1-3 Forward & 1-8 Reverse	
Rated net horsepower	116 kW / 155 HP @ 2000 rpm
Rated gross horsepower	129 kW / 173 HP @ 2000 rpm
in 4-8 Forward	
Rated net horsepower	138 kW / 185 HP @ 2000 rpm
Rated gross horsepower	151 kW / 202 HP @ 2000 rpm
Max. torque	925 Nm
Lubrication system	
Type	Forced lubrication by gear pump
Filter	Full-flow
Oil Cooler	Water cooled
Cooling system	
Forced circulation by centrifugal water pump, blow type fan	
Air-cleaner	
Dry cyclone type with dust evacuator, double elements	
Air-compressor	
Type	Air cooled
Displacement	284 cm ³ /rev.
Starting method	
Type	Electric starting motor
Starting motor	24volt - 5.5 kW
Alternator	24volt - 50amp
Battery	24volt (12volt x 2) - 150Ah

POWER TRAIN

Transmission	Power-shift (Planetary gear, Hydraulically actuated) with 8 speeds
Final Drive	Double reduction by spiral bevel and planetary gear with operator controlled hydraulically lock/unlock differential
Brake	
Service brake	Air actuated, multi disc, oil cooled on all 4 rear wheels
Parking brake	Spring engaged, air disengaged, multi disc, oil cooled on T/M output shaft

PERFORMANCE

Travel speeds (with standard 14.00-24 tires)	
Forward	
Gear 1	3.6 km/h
Gear 2	4.9 km/h
Gear 3	7.5 km/h
Gear 4	10.3 km/h
Gear 5	14.7 km/h
Gear 6	19.8 km/h
Gear 7	30.1 km/h
Gear 8	41.4 km/h
Reverse	
Gear 1	3.3 km/h
Gear 2	4.4 km/h
Gear 3	6.7 km/h
Gear 4	9.2 km/h
Gear 5	13.2 km/h
Gear 6	17.8 km/h
Gear 7	27.1 km/h
Gear 8	37.2 km/h
Max. drawbar pull	83082 N (8472 kg)

HYDRAULIC SYSTEM

Circuit	Closed-center, load sensing system
Oil Pump	Variable-displacement piston pump
Capacity	174 l/min
System pressure	172 bar
Oil Motor	
Type	Trochoid motor
Capacity	76 l/min
Output horse power	19.8 kW
Control valve	8 sections, closed-center control
Safety pressure	206 bar

SERVICE CAPACITY

Radiator	50 ℓ.
Fuel tank	275 ℓ.
Engine crankcase	29 ℓ.
Transmission	38 ℓ.
Rear axle case	30 ℓ.
Hydraulic tank	58 ℓ.
Tandem drive case (each side)	85 ℓ.
Circle reverse gear case	3.5 ℓ.

FRAME

Main frame	Fabricated steel box section
Section (width x height)	280 mm x 324 mm
Rear frame	Fabricated steel, integral with rear axle case
Rear axle	Full floating
Front axle	
Type	Reversed elliot type, hydraulic leaning
Oscillation (Total)	30 Degrees
Wheel lean (Total)	40 Degrees
Ground clearance	595 mm
Drawbar	
Type	Fabricated solid steel bars, A-shaped.
Section (height x thickness)	200 mm x 32 mm
Circle	
Type	Internal gear
Outside diameter	1420 mm
Turning angle	360 Degrees
Circle rotation control	Hydraulic
Circle guide shoes	6

TANDEM DRIVE

Roller chain drive	
Depth	510 mm
Width	180 mm
Sidewall thickness	
Inner wall	22 mm
Outer wall	22 mm
Drive chain pitch	51 mm
Center distance	1565 mm

MOLDBOARD (BLADE)

Type	Wear-resistant steel, with box section reinforcement with hydraulic side shift and hydraulic blade tip
Length x Height x Thickness	3.710 mm x 610 mm x 19 mm
Number of cutting edges	
Length x Height x Thickness	2 – 1829 mm x 152 mm x 15.9 mm

BLADE RANGE

Max. lift above ground	525 mm
Max. drop below ground	660 mm
Max. shoulder reach	
Left	1970 mm
Right	2000 mm
Max. bank cutting angle	90 Degrees
Blade pitch angle	
Blade tilt	46 Degrees
Angle of cut	39° to 85°

STEERING SYSTEM

Type	Full hydraulic front wheel steering with hand metering unit.
Steering angle	47 Degrees
Pump	Gear type
Capacity	51 l/min
System pressure	172 bar
Frame articulation angle (both left and right)	29 Degrees
Minimum turn radius (outside front tires)	6.9 m

OPERATING WEIGHT (ISO7134)

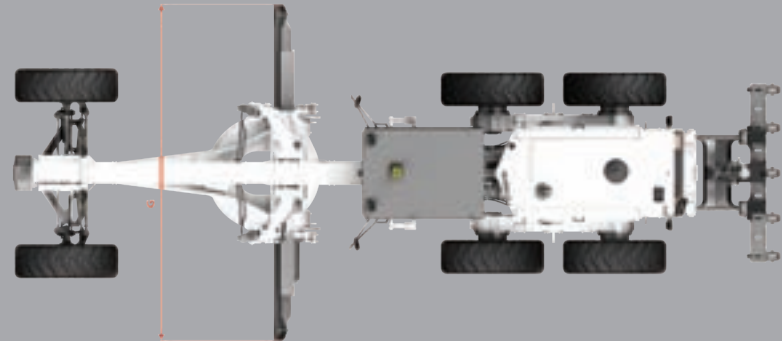
17.700 kg
 With 14.00-24-12PR tires (op), rear mounted ripper, front push block. T/M belly guard, operator, Air-Con., ROPS/FOBS Cab., 1/2 tank diesel and lighting/mirrors etc. for road registration.

WHEELS

Tire	14.00-24-12PR (G-2)TUBE/ TUBELESS
Rim	8.00TG x 24
Inflation Pressure	37 psi

DIMENSIONS (approximate)

MODEL		MG460	MG460 CAB
A: Total Length	mm	8580	8580
B: Total Width	mm	2440	2440
C: Total Height	mm	-	3480
C': Total Height	mm	3090	-
D: Wheel Base	mm	6250	6250
E: Blade Base	mm	2790	2790
F: Rear Axle Center	mm	782.5	782.5
G: Blade Length	mm	3710	3710
H: Total Length (Front Counter Weight- Rear Ripper)	mm	9865	9895
K: Tire Center Lines	mm	2000	2000



WARNING: HİDROMEK reserves the right to change the values given in this catalogue and designs indicated without prior notification.

STANDART EQUIPMENTS

ELECTRICAL

Alternator, 50 Ampere
Back up alarm buzzer
Battery 24 Volt – 150 Ah
Motor starting, 24 Volt-5.5 Kw
Electric horn
2 Head lights
Rear combination lamps
Electrical System, 24V

POWER TRAIN

Air cleaner, dry cyclone type with dust evacuator, dual element
Service brakes; air actuated, multi disc, oil cooled on all four rear wheels
Parking brakes; spring engaged, air disengaged, multi disc, oil cooled on transmission output shaft
Engine; Mitsubishi 6D24-TUN water cooled, 4-cycle, in line 6 cylinder, direct injection, diesel engine, with turbo charger
Engine muffler
Tandem drive, roller chain drive
Transmission, power shift with 8 speeds for both forward and reverse
Priming pump

Differential lock/unlock

Variable Horse Power

OPERATOR ENVIRONMENT

Accelerator
Adjustable control console
Indicator lights and buzzer
High beam indicator
Turn signal indicator
Parking brake indicator
Air filter warning lamp
Engine overheat warning lamp
Engine oil filter warning lamp
Engine oil pressure warning lamp
Alternator not charging warning lamp
Air pressure alarm buzzer
Parking brake alarm buzzer
Engine overheat alarm buzzer
Water temperature gauge, Air pressure gauge, Fuel gauge
Hydraulic controls (blade lift, blade tip, center shift, side shift, circle drive, front wheel lean and articulation)
Electric hour meter
Center shift un-lock switch
Key switch
Handle throttle accelerator lever
Power steering, hydraulic
Adjustable, operator's suspension seat
Seat belt

Steering wheel

Operator guard

OTHER EQUIPMENTS

Parts catalog
Circle drive shear pin
Frame, articulated with safety lock
Reversible side edges and overlay end-bits for moldboard
Fuel tank, 273 L
Rear drawbar with pin
Drawbar, 6 shoes with replaceable bronze wear strips
Cross bar, 5 position
Moldboard, 3710 mm x 610 mm x 19 mm
Vandalism protection; fuel tank, engine compartment doors
Antifreeze, LLC (Long Life Coolant)
Tool kit
TIRES & RIMS
Tire: 14.00-24-12 PR
Rim: 8.00 TG x 24

MG460 OPTIONAL EQUIPMENTS

Cabs / Canopies;

Canvas Canopy - Steel Canopy - ROPS Canopy - Steel Cab - ROPS Cab - ROPS/FOPS Cab
Air conditioner
Blade slip clutch
Rear under view mirror
Air dryer
Heater with defroster
Vandalism protection; cap locks for hydraulic tank, radiator access cover
Front Dozer Blade, 2700 mm width
Moldboard (L x H x T)
Rear ripper, 3 shanks and 5 shanks are available

Blades

3710 mm x 610 mm x 22 mm
4010 mm x 610 mm x 19 mm
4010 mm x 610 mm x 22 mm
4310 mm x 610 mm x 22 mm
Scarifier, mid mounted, V type, 11 teeth
Front counter weight
Rear counter weight
Room mirror, inside cab
Mid-mounted working lamp
Rear working lamps
Fuel water separator
Pre-cleaner
Floor mat

NOT ONLY WITH OUR MACHINES, BUT ALSO WITH THE SERVICES WE PROVIDE, WE ARE DIFFERENT!



Expert Service

Our personnel who are experts in their subjects provide the opportunity of the highest quality and the fastest service with their high-end equipments.



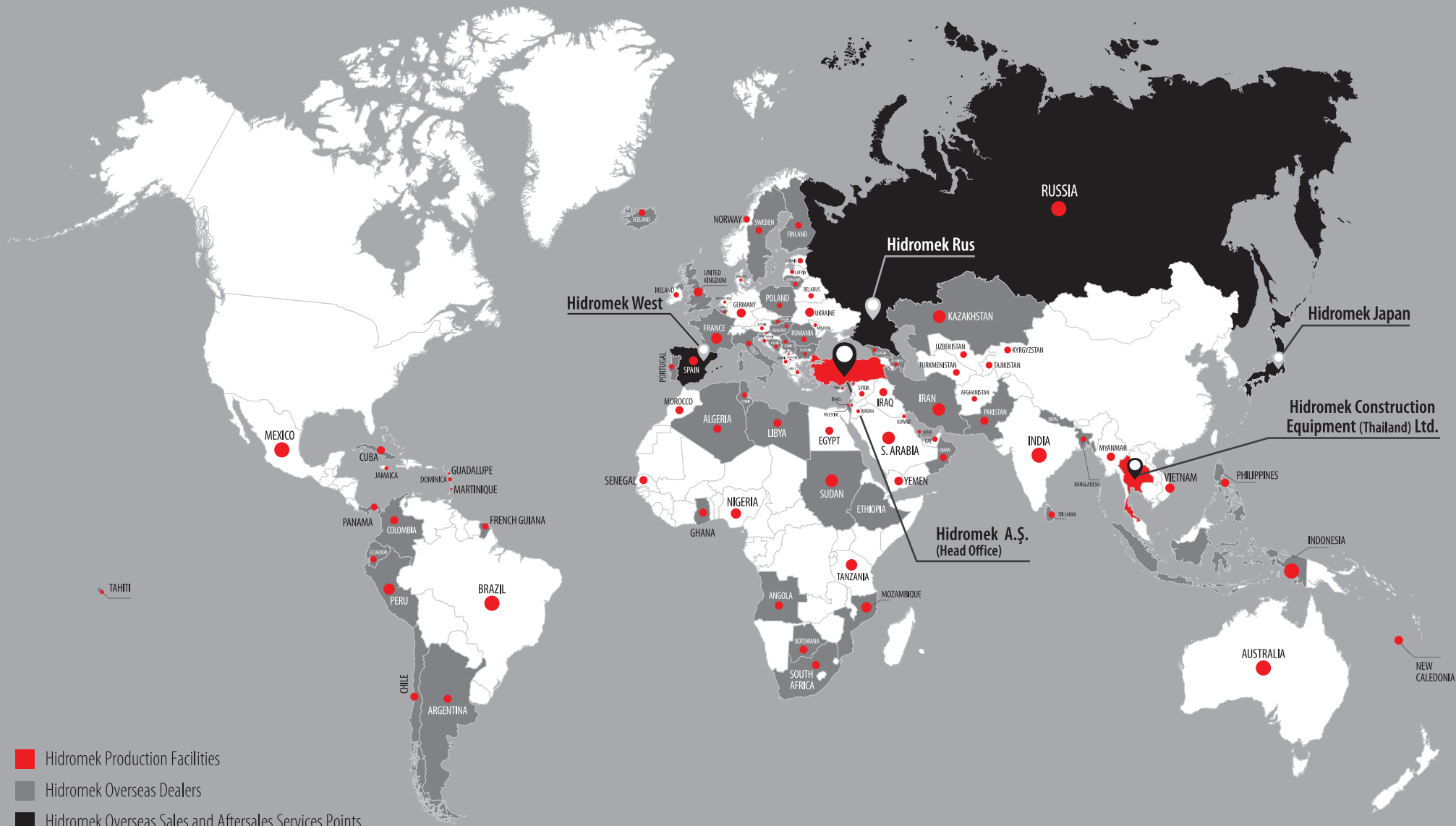
Global Service Network

Hidromek that has global service network offers sale and service even in the various points of the world with hundreds of sale and service points abroad.



High Customer Satisfaction

A customer-oriented approach is adopted in all our operations in order to satisfy our customer at the highest level, add value their works and gain loyalty of them.



- Hidromek Production Facilities
- Hidromek Overseas Dealers
- Hidromek Overseas Sales and Aftersales Services Points
- Countries Hidromek Machines Running

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