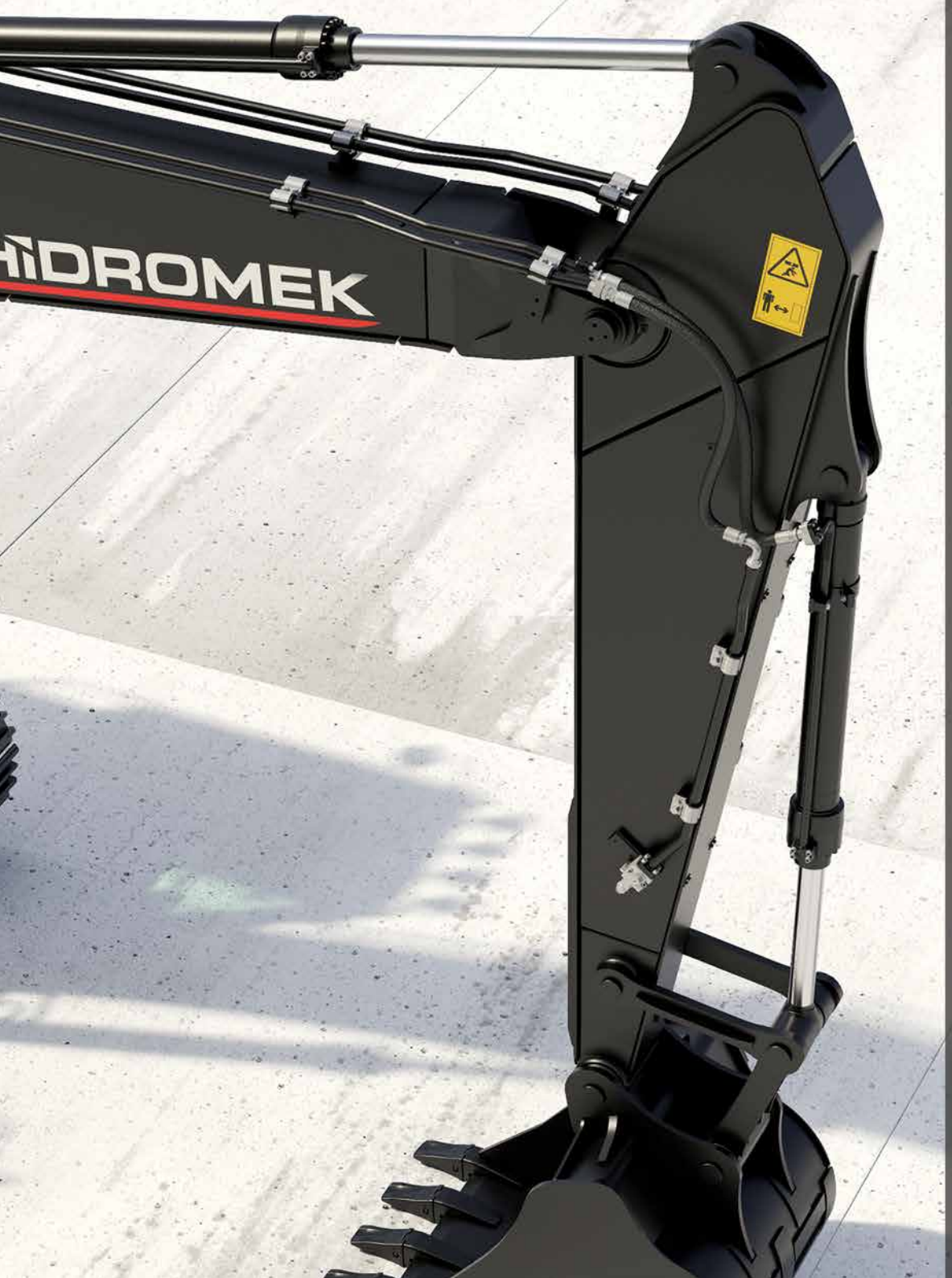
H4 SERIES

HMK 310 LC

HİDROMEK

310
HMK 310 LC



New H4 Series

Innovation coming from experience

Being produced with developed hydraulic system design, HİDROMEK's new H4 Series excavators offer an outstanding performance by working faster, more productively and more efficiently. H4 Series excavators produce more work with less fuel; hence, they are more profitable for their users than ever.

H4 SERIES

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The information and images, and equipment presented in this brochure are either standard or optional depending on the configuration. HİDROMEK has the right to modify the specifications and the designs of the model indicated in this brochure without prior notice.

ATTENTION

More work within less time

17 % More productive*

Shortening the work cycle time with bigger bucket capacity and speed, H4 Series carry the productivity to the top level with their new technology.

7 % More efficient*

With improvements to the attachment and hydraulic group, H4 Series excavators ensure more work within less time.

10 % Faster *

With faster hydraulic movements due to developed hydraulic system design, H4 Series excavators ensure more work within less time.

* The data are prepared in comparison with the previous serie in HP mode.

For product video

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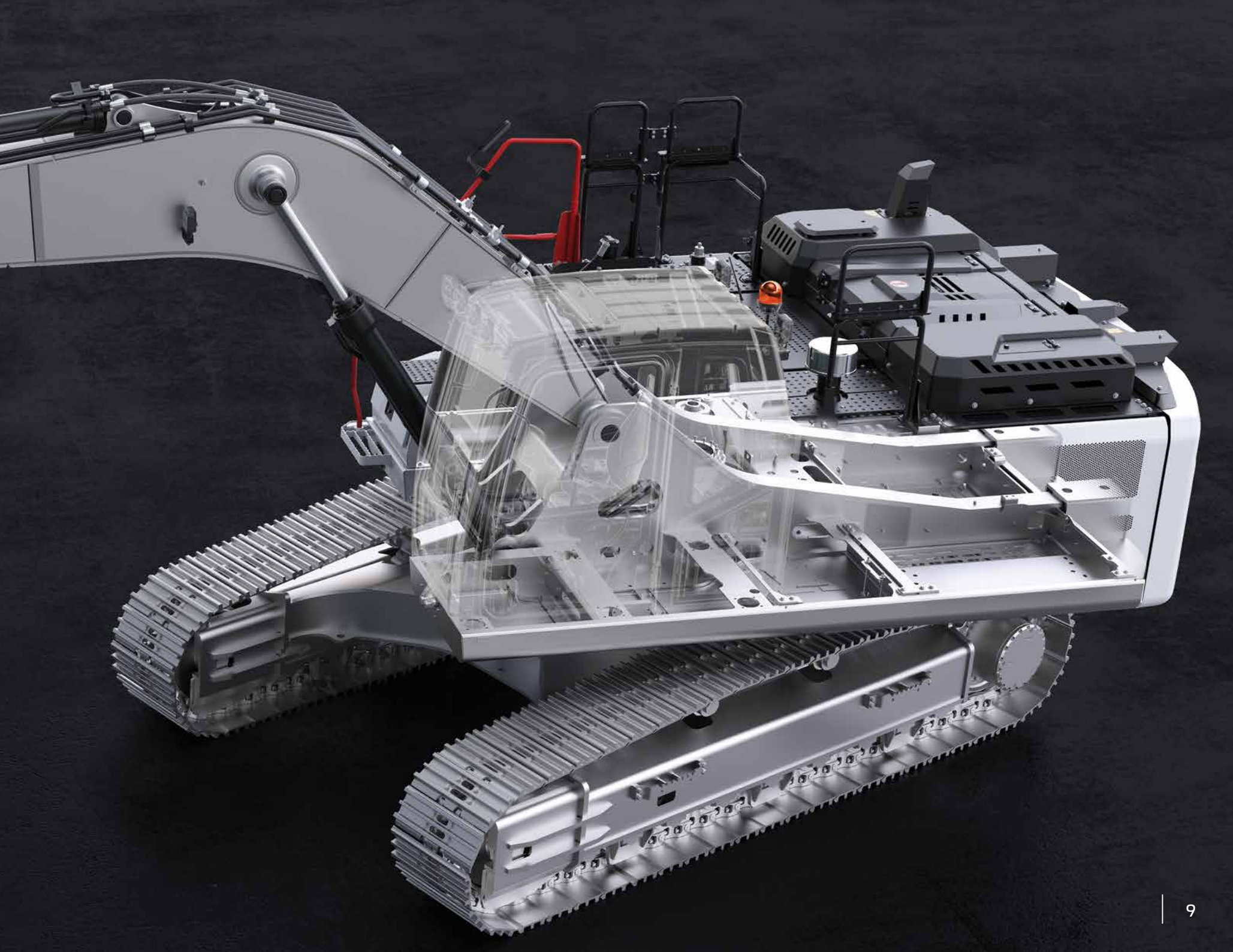
More durable

Produced to have reinforced heavy duty construction considering maximum performance, long life and smooth operation in severe field conditions, HİDROMEK excavators ensure more durability with the improvements made in the new H4 Series.



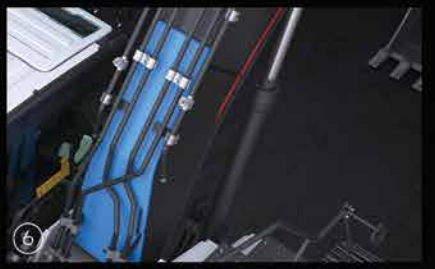
① More durable anti-wearing plates (Hardox 450 HB)

② Optimized bucket form

③ Reinforced arm supporting parts

④ Reinforced casting tip

⑤ Heavy duty arm



⑥ Reinforced boom structure

⑦ Reinforced boom cylinder cast bearing

⑧ Reinforced lowerframe and undercarriage components

Reinforced heavy duty construction

With their reinforced heavy duty construction produced at HİDROMEK's modern production facilities and going through sensitive quality-control processes, H4 Series excavators have excellent durability.

Bronze-Graphite Bushings

Bronze-graphite bushings used in boom-arm and boom-frame connection points increase the lubrication period, and greatly prevent the wear of the pins because of graphite, having a very high grease absorption and retention capability, embedded in the inner structure of the bushings.

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Safe working environment

ROPS&FOPS2 cabin

Having the standards of ROPS (Roll Over Protective Structure) & FOPS2 (Falling Object Protective Structure), H4 Series excavators provide maximum safety and durability.

Wide vision capacity

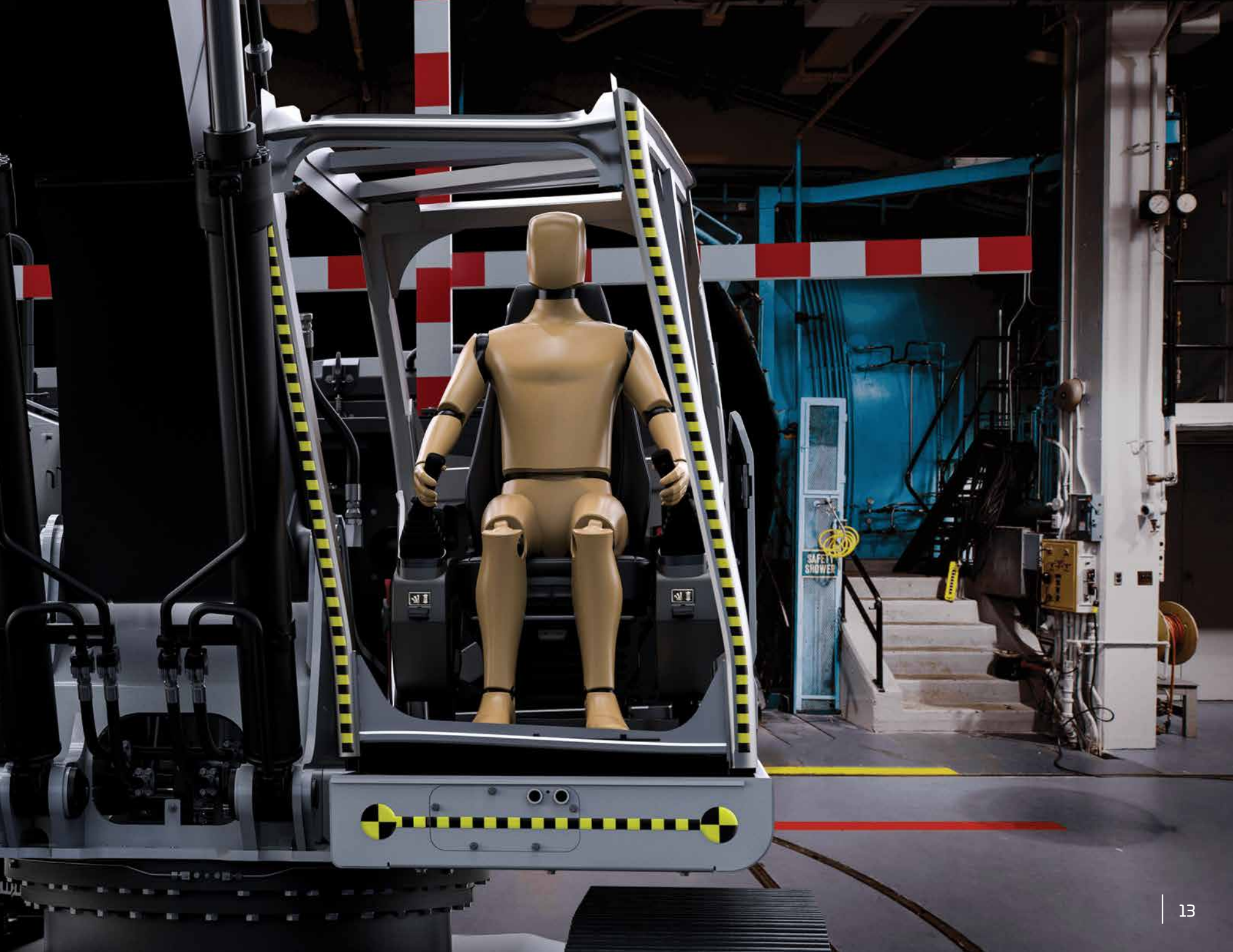
Designed with giving special importance to occupational safety, H4 Series ensure excellent vision by minimizing the blind spot on the side and rear cameras. Along with the increase in the number of led headlights, the night vision is significantly improved on H4 Series excavators; in addition, there are also red handles and warning labels providing maximum safety for the operator.

Audio warning systems

H4 Series excavators enable safer working environment with their automatic starting horn, swing warning system and travel warning system.

Flame holder system

Where sparks are dangerous, regeneration inhibit feature is activated from the cabin, so flame from the exhaust is prevented temporarily.


SAFETY
SHOWER

Shaped with technology

Electronic system of H4 Series excavators designed to protect the engine and hydraulic components to provide fuel saving and superior performance.

Automatic stop system

In the new series, automatic stop system through configurable idling and stopping times provides fuel saving by stopping the engine after the machine is on idle. Automatic stop system in H4 Series helps to decrease the operational costs to minimum, and contributes to saving the environment.

Safe fuel transfer pump

"Safe fuel transfer pump" added to H4 Series stops the pump automatically when the tank is full and this feature gets activated also when the pump does not transfer fuel for 30 seconds, and ensures that the pump stops automatically.

Power boost technology

In H4 Series, power boost technology gets activated automatically in the conditions when the machine needs extra power, and ensures that the machine has the proper performance for the work.

8" Touch control panel

8 inch touch control panel is positioned ergonomically at a point that the operator can easily reach it. Touch control panel having high quality hardware and a large screen easily enables to control the machine features and access to machine information.

The features of touch control panel:

- It offers multi-language option
- Music system is integrated into 8 "touch control panel.
- It allows the operator to adjust the flow required for the attachment without leaving the cab and save this information for 20 different attachments.
- Selection of double or single acting line can also be done over the user panel.
- During travel, rear and side view cameras with improved image quality and activated automatically can be controlled.
- Information on the average and instant fuel consumption can be obtained.
- Information on status such as atmospheric pressure, turbo boost pressure, fuel pressure and hydraulic pump pressure can be obtained.
- User can acquire working hour information such as work, attachment and travel.
- Maintenance registries can be obtained, and the user is warned when the maintenance time approaches.
- Failure codes and registries can be obtained.
- Audio warning systems can be controlled.

OPERA, the guide of the field

H4 Series excavators are equipped with Opera (HİDROMEK Operator Interface) for the operator to use the machine easily, and feel comfortable and relaxed as he is in an office environment.

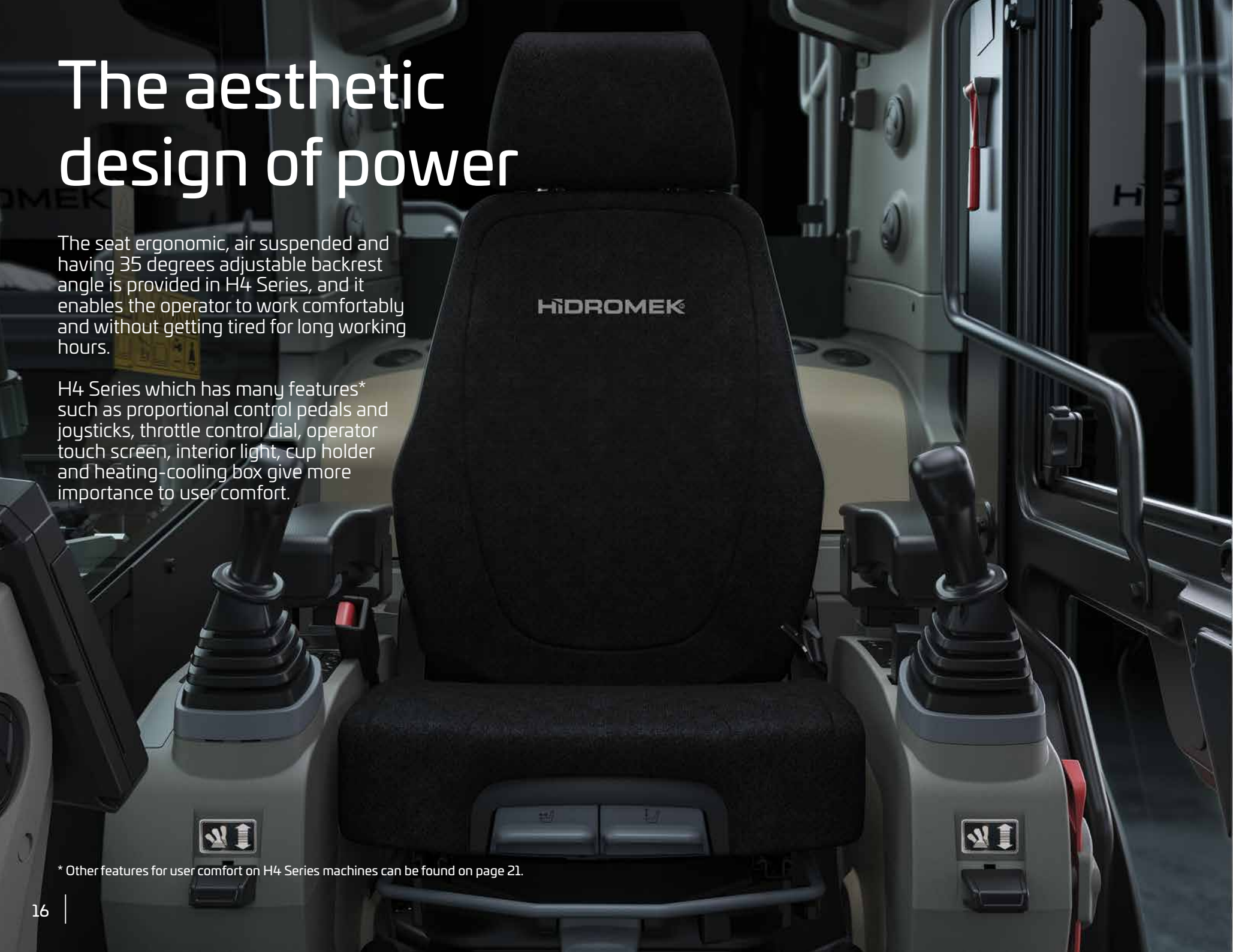
Functions to be controlled by means of Opera

- Engine RPM control
- Access to control panel menu
- Functions of lights, windshield wipers and rear view camera
- Music system control
- Auto stop control of the engine to ensure maximum fuel economy during low idle
- On H4 Series machines, the preheating system available to protect the engine and hydraulic systems can be controlled via Opera.

The aesthetic design of power

The seat ergonomic, air suspended and having 35 degrees adjustable backrest angle is provided in H4 Series, and it enables the operator to work comfortably and without getting tired for long working hours.

H4 Series which has many features* such as proportional control pedals and joysticks, throttle control dial, operator touch screen, interior light, cup holder and heating-cooling box give more importance to user comfort.



* Other features for user comfort on H4 Series machines can be found on page 21.

Office comfort in construction equipment

Automatic air conditioning system

Air vents and air conditioning system which can automatically adjust itself according to the ambient heat located in the redesigned cabin provide the best cooling performance in its class by 30%.

Wide angle view

On the new series machines, the new two-piece windshield wiper system designed for creating more comfortable work environment provides a wide angle view which increases the work efficiency of the user.

Led headlights for night vision

Led headlights on new H4 Series machines improve the night vision, and enable the operator to work more safely and comfortably.

Dampers

By using 6 silicone dampers on H4 Series excavators, noise, shock and vibration are absorbed and prevented from being transmitted to the cabin under any working condition.

You have the control with HİDROMEK SmartLink

Telematic system HİDROMEK Smartlink allows the user to easily access to machine location and technical information via computer and mobile phone.

Follow the work time and location of your machine through HİDROMEK Smartlink!
Through GPS tracking system, it is possible to track the location and the work time intervals of the machine.

Analyze your fuel consumption through HİDROMEK Smartlink!
It is possible to analyze fuel consumption according to the working conditions of the machine and daily fuel parameters.

Check the works for which your machine has been used through HİDROMEK Smartlink!
Through working mode information, it is possible to see the daily and total working hours of the machine for excavation and leveling and with crusher or with other optional attachments besides the power mode information and the speed ranges.

Follow your machine's maintenance through HİDROMEK Smartlink!
Under the Alerts list, the machine's upcoming maintenance can be checked while the information of the nearest authorized service can be obtained, and it can be contacted.

Contact the nearest authorized service or regional service through HİDROMEK Smartlink!
With the application, it is possible to obtain the information on Regional and Authorized Services of HİDROMEK After Sales Services as well as the directions to them.

Have performance reports for the selected periods of time for your machines through HİDROMEK Smartlink!
For any selected periods of time, it is possible to have a report on daily fuel consumption, average fuel consumption, power and working modes, daily work time intervals and locations.

To download Smartlink application

Easy maintenance and fast service for H4 Series through safe and easy access

H4 Series excavators, designed considering fast access to hydraulic and engine equipment, provide easy maintenance and service. Most of the maintenance can be easily carried out without getting on the machine, which shortens the service time and increases machine work time.

Automatic greasing system ensures that all parts of the machine can be lubricated from one single center.

ENGINE

Brand & Model	ISUZU-6HK1X
Type	Water cooled, 4 cycles, 6 cylinders, inline, diesel engine with direct injection, turbocharger and intercooler
Power Gross	264 HP (197 kW) @1900 rpm / SAE J1995
Maximum Gross Torque	1050 Nm @1500 rpm
Displacement	7790 cc
Bore x Stroke	115 mm x 125 mm
Emission Class	EU: Stage V

HYDRAULIC SYSTEM

MAIN PUMP

Type	2 axial piston pumps with variable displacement and swashplate
Max. Flow Rate	2 x 266 L/min
Pilot Pump	Gear type, 30,5 L/min

WORKING PRESSURE

Attachment	350 kgf/cm²
Power Boost	380 kgf/cm²
Travel	350 kgf/cm²
Swing	285 kgf/cm²
Pilot	40 kgf/cm²

HYDRAULIC CYLINDERS

Boom	2 x ø 135 x ø 95 x 1.455 mm
Arm	1 x ø 150 x ø 105 x 1.760 mm
Bucket	1 x ø 135 x ø 95 x 1.195 mm

SWING SYSTEM

Swing motor	Fixed swashplate piston motor integrated with super shock absorber valve
Reduction	2 stage, planetary gear type
Swing Brake	Hydraulic disc type, pilot operated and automatically released
Swing Speed	10,4 rpm

LOWER FRAME

Construction	"X" type lower frame with pentagon shaped box type side frames
Shoe	Triple grouser
No. of Shoes	2 x 51 pieces
No. of Lower Rollers	2 x 9 pieces
No. of Upper Rollers	2 x 2 pieces
Full Trackguard	2 x 3 pieces
Track Tensioner	Hydraulic type with spring cushioning

ELECTRICAL SYSTEM

Voltage	24 V
Battery	2 x 12 V / 150 Ah
Alternator	24 V / 50 A
Starter Motor	24 V / 5 kW

TRAVEL AND BRAKES

Travel		Fully hydrostatic
Travel Motor		Axial piston motor with 2 speed stages and swashplate
Reduction		2 stage, planetary gear type
Travel Speed	High Speed	5,1 km/h
	Low Speed	3,0 km/h
Max. Traction		25.460 kgf
Gradeability		35° (%70)
Parking Brake		Hydraulic disc type, pilot operated and automatically released
Ground Pressure (With 600 mm Shoe)		0,61 kgf/cm²

FILLING CAPACITIES

Fuel Tank	475 L	Engine Cooling System	55 L
Hydraulic Tank	210 L	Engine Oil	38 L
Hydraulic System	395 L	Urea	70 L

OPERATING WEIGHT (kg)

	Mono Boom	LR
HMK 310 LC	32.200	34.600
HMK 310 NLC	32.100	-

EQUIPMENT — HMK 310 LC

Engine	Standard	Optional
Water cooled diesel engine with turbocharger and intercooler	●	
Engine pre-heat function	●	
Automatic idling	●	
One touch auto-idle system	●	
Automatic stop function	●	
Two-stage air filter	●	
Air filter clogged indicator	●	
Low engine pressure warning system	●	
Overheat warning system	●	
Adjustable power modes	●	
High altitude working function	●	
Electronical engine control	●	

Hydraulic System		
Boom and arm regenaration valve	●	
Automatic power boost	●	
Smooth boom feature		O
Main hydraulic filter	●	
Backup ports (valve)	●	
Cylinder cushioning and contamination seals	●	
Single-acting hydraulic line, breaker		O
Double- acting hydraulic line, crusher		O
Additional line		O
Quick coupling line		O
Attachment settings through instrument panel		O

OPERATOR'S CAB		
Pressurized and sound isolated cabin	●	
Air-conditioning	●	
Air-suspension seat	●	
Air-suspended, heated, and seatbelt-warning seat		O
Heated seat		O
Operator touch screen	●	
Opera control system	●	
Throttle control dial	●	
Automatic travel speed (low / high)	●	
4 different working modes	●	
Sliding windscreen and removable lower windscreen	●	
Openable left door window	●	
Upper and lower windshield wiper	●	
Joysticks and pedals	●	
Travel pedals and control levers	●	
Proportional controlled pedals and joysticks		O
Electric horn	●	
Intrerior light	●	
Cup-holder	●	
Convenient storage	●	
Convenient storage (for equipment)	●	
Heating & Cooling box	●	
Easy-cleaned floor	●	
12V power socket	●	
Computer connection port	●	
Radio / mp3 / usb / Aux	●	
Detachable Movement Levers		O
Air Compressor		O

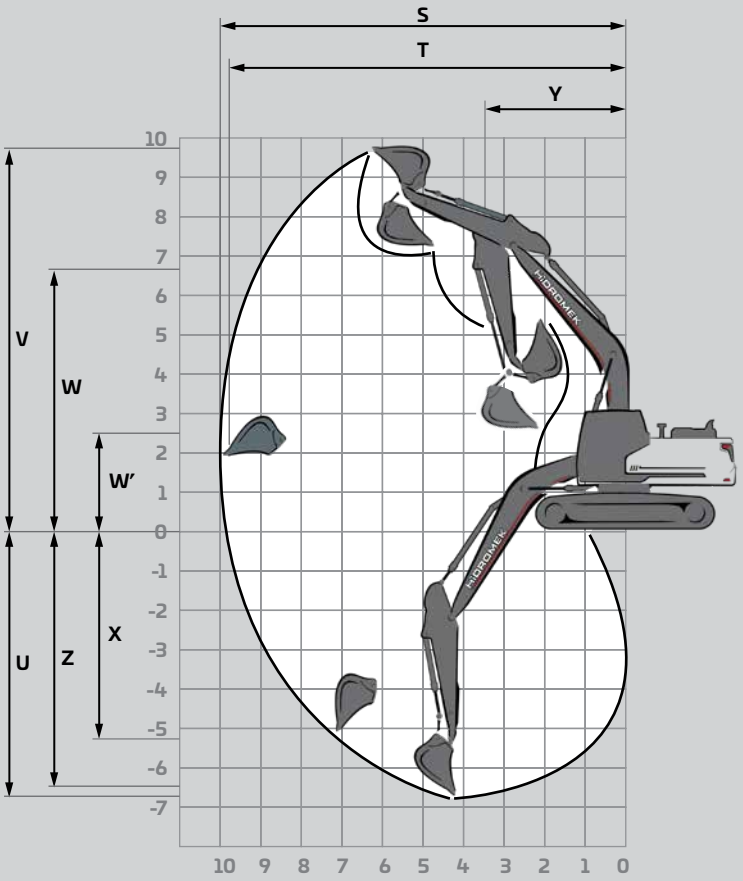
Lower Frame	Standard	Optional
Narrow Lower Chassis (NLC)		O
Track width options 700/800		O
Lubricated and sealed track components	●	
Dozer blade		O
Mooring points for shipment	●	

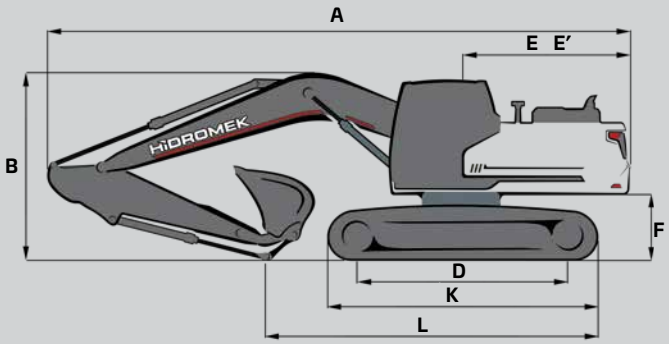
Safety		
ROPS (Roll Over Protective Structure)	●	
*FOPS2 (Falling Object Protective Structure)	●	
Rear view camera	●	
Side view camera		O
Right and left rear view mirrors	●	
Working lamps	●	
LED working lamps		O
Rotating beacon		O
Swing and travel alarm		O
Emergency engine stop switch	●	
Pilot operated and automatically released swing brake	●	
Boom and arm cylinder safety valve		O
Overload warning system		O
Battery cut-off switch	●	
Handrails by the steps and on the upper frame	●	
Perforated metal non-slip plates	●	
Safety locking device	●	
Safety glass	●	
Emergency hammer	●	
Lockable fuel tank cover	●	
Upper and lower guards for windshield		O
Fuel Safety System		O

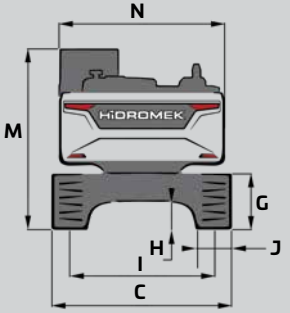
Miscellaneous		
Telematic system (HİDROMEK Smartlink)		O
GEO System		O
Fuel transfer pump with automatic stop	●	
Water sensor on fuel pre-filter	●	
Bio oil B7	●	
Alternator - Battery	●	
Battery Charge Indicator	●	
Automatic lubrication system		O
Working lamp guards		O
Hydraulic breaker return line filter		O
Double pump combination function		O
Choosing single or double acting attachment on the instrument panel		O
Choosing the control method for the optional attachment		O
Boom cylinder piping guard		O
Bucket cylinder rod guard		O
Warning horn	●	
Counterweights		O

● **STANDARD** O **OPTIONAL**

(*) FOPS2 upper cabin protection is standard in countries with CE requirements.







DIMENSIONS

			LC				NLC	
			Mono Boom			LR	Mono Boom	
		BOOM (m)	6,28			10,30	6,28	
		ARM (m)	2,10	*2,50	3,07	7,80	2,50	3,07
GENERAL DIMENSIONS (mm)	A)	Overall Length	10.930	10.880	10.790	14.800	10.880	10.790
	B)	Overall height (to top of boom)	3.580	3.490	3.320	3.270	3.490	3.320
	C)	Overall Width	3.200			3.400	2.990	
	D)	Distance between tumblers	4.030					
	E)	Distance from center of swing to rear end	3.235					
	E´)	Tail swing radius	3.255					
	F)	Counterweight Clearance	1.205					
	G)	Track Height	1.070					
	H)	Ground Clearance	500					
	I)	Track Gauge	2.600				2.390	
	J)	Shoe Width	600			800	600	
	K)	Track Length	4.950					
	L)	Length on ground (transport)	7.540	6.780	5.860	4.820	6.780	5.860
	M)	Overall height of cab	3.140					
	N)	Overall width of upperstructure	2.990					
WORKING RANGES (mm)	S)	Maximum Digging Reach	10.020	10.370	10.910	18.360	10.370	10.910
	T)	Maximum Digging Reach on Ground Level	9.790	10.150	10.700	18.240	10.150	10.700
	U)	Maximum Digging Depth	6.360	6.760	7.330	14.250	6.760	7.330
	V)	Maximum Digging Height	9.860	9.990	10.290	14.920	9.990	10.290
	W)	Maximum Dumping Height	6.870	7.020	7.300	12.550	7.020	7.300
	W')	Minimum Dumping Height	3.790	3.310	2.760	2.500	3.310	2.760
	X)	Maximum Vertical Digging Depth	4.890	5.140	5.780	13.700	5.140	5.780
	Y)	Minimum Swing Radius	4.440	4.360	4.280	5.930	4.360	4.280
	Z)	Maximum Digging Depth (2440 mm level)	6.140	6.560	7.160	14.140	6.560	7.160

* Standard

FORCES

		LC				NLC	
		Mono Boom			LR	Mono Boom	
	BOOM (m)	6,28			10,30	6,28	
	ARM (m)	2,10	2,50*	3,07	7,80	2,50	3,07
SAE	Bucket Digging Force	17.200			5.700	17.200	
	Bucket Digging Force (Power Boost)	18.700			-	18.700	
	Arm Crowd Force	18.700	15.700	13.000	4.700	15.700	13.000
	Arm Crowd Force (Power Boost)	20.200	17.000	14.100	-	17.000	14.100
ISO	Bucket Digging Force	19.600			10.500	19.600	
	Bucket Digging Force (Power Boost)	21.300			-	21.200	
	Arm Crowd Force	19.600	16.400	13.600	6.900	16.400	13.600
	Arm Crowd Force (Power Boost)	21.300	17.800	14.700	-	17.800	14.700

A- Material density less than 2.000 kg/m³
B- Material density less than 1.800 kg/m³
C- Material density less than 1.500 kg/m³
D- Material density less than 1.200 kg/m³

* Standard

HEAVY DUTY

STANDARD BUCKET

	Width	1.490 mm
	Capacity (SAE)	*1,60 m³
	Weight	1,370 kg
	Number of Teeth	5
ARM	2,10 m	A
	*2,50 m	B
	3,07 m	C

OPTIONAL BUCKET SELECTION SCHEME

General Purpose Bucket

Heavy Duty Type Bucket

650 mm	750 mm	1.300 mm	1.500 mm	1.700 mm	750 mm	1.095 mm	1.270 mm	1.410 mm	1.550 mm	1.620 mm
0,55 m³	0,60 m³	1,25 m³	1,50 m³	1,70 m³	0,60 m³	1,10 m³	1,30 m³	1,50 m³	1,70 m³	1,80 m³
730 kg	740 kg	1.060 kg	1.160 kg	1.320 kg	860 kg	1.120 kg	1.220 kg	1.340 kg	1.400 kg	1.450 kg
3	3	5	5	5	3	4	4	5	5	5
A	A	A	A	B	A	A	A	A	B	C
A	A	B	B	C	A	A	A	B	C	C
A	A	C	C	C	A	A	A	C	C	D

* Standard

ATTACHMENTS

QUICK COUPLER

ROCK TYPE BUCKET

POLYP

RIPPER

CLEANING BUCKET

LIFTING CAPACITY (kg)															HMK 310 LC
	Boom: 6,28 m		**Arm:** 2,5 m		Without bucket		STD, 600 mm Crawler		**CW:** 5200 kg				: Front	: Side	
A, m	**1,5**		**3,0**		**4,5**		**6,0**		**7,5**		**9,0**		**Maximum Reach**		
B, m															**R, m**
7,5							*7000	*7000					*7250	7000	6,80
6,0							*7400	*7400	*7100	5900			*7200	5550	7,79
4,5					*10650	*10650	*8450	8100	*7450	5750			*7300	4800	8,39
3,0							*9750	7600	*8100	5550			7050	4450	8,69
1,5							*10900	7250	8600	5300			6900	4300	8,72
0 (Ground)					*15900	10550	*11550	7000	8450	5200			7100	4400	8,48
-1,5			*12800	*12800	*15450	10600	*11550	6950	8450	5150			7800	4800	7,95
-3,0			*19200	*19200	*14200	10800	*10750	7100					*8700	5750	7,07
-4,5			*15300	*15300	*11450	11200							*8750	8100	5,64

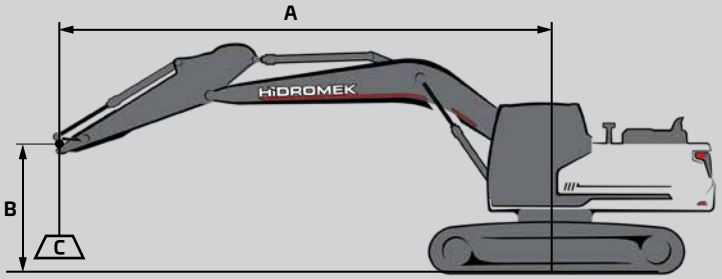
LIFTING CAPACITY (kg)															HMK 310 LC
	Boom: 6,28 m		**Arm:** 3.07 m		Without bucket		STD, 600 mm Crawler		**CW:** 5200 kg				: Front	: Side	
A, m	**1,5**		**3,0**		**4,5**		**6,0**		**7,5**		**9,0**		**Maximum Reach**		
B, m															**R, m**
7,5													*4750	*4750	7,48
6,0									*6450	6000			*4500	*4500	8,39
4,5					*9450	*9450	*7750	*7750	*6950	5850			*4500	4350	8,95
3,0					*12400	11750	*9150	7750	*7650	5600	6700	4200	*4600	4050	9,23
1,5					*14750	10900	*10450	7300	*8400	5350	6550	4100	*4900	3900	9,26
0 (Ground)					*15700	10550	*11300	7000	8450	5150	*5950	4000	*5400	4000	9,04
-1,5	*9000	*9000	*12750	*12750	*15700	10500	*11550	6900	8350	5100			*6250	4300	8,54
-3,0	*14950	*14950	*20200	*20200	*14850	10600	*11100	6950	8450	5150			*7850	5000	7,72
-4,5			*17600	*17600	*12750	10950	*9400	7200					*8400	6550	6,45

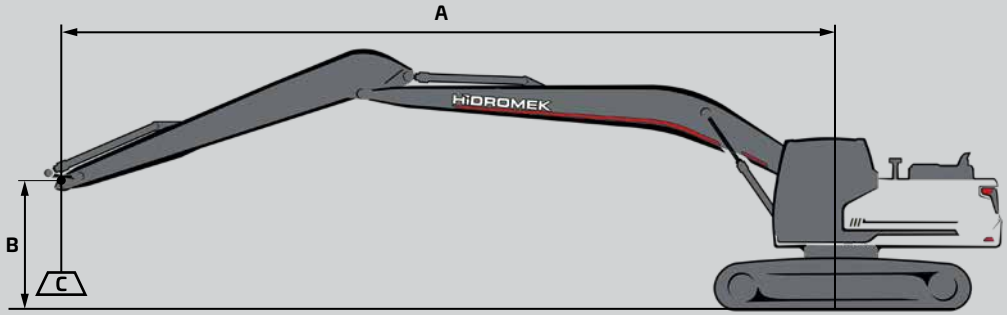
LIFTING CAPACITY (kg) — HMK 310 NLC

	Boom: 6,28 m		**Arm:** 2,5 m		Without bucket		STD, 600 mm Crawler		**CW:** 6000 kg				: Front	: Side	
A, m	**1,5**		**3,0**		**4,5**		**6,0**		**7,5**		**9,0**		**Maximum Reach**		
B, m															**R, m**
7,5							*7050	*7050					*7250	6800	6,80
6,0							*7400	*7400	*7150	5750			*7200	5350	7,79
4,5					*10700	*10700	*8450	7800	*7500	5600			*7300	4650	8,39
3,0							*9800	7350	*8150	5350			7350	4300	8,69
1,5							*10950	7000	8750	5150			7250	4200	8,72
0 (Ground)					*15950	10100	11600	6750	8850	5050			7450	4300	8,48
-1,5			*12850	*12850	*15500	10100	11600	6700	8800	5000			8150	4700	7,95
-3,0			*19250	19250	*14250	10300	*10800	6850					*8750	5550	7,07
-4,5			*15400	*15400	*11500	10700							*8800	7800	5,64

LIFTING CAPACITY (kg) — HMK 310 LC LR

	Boom: 10,3 m		**Arm:** 7,8 m		Without bucket		STD, 800 mm Crawler		**CW:** 7100 kg						: Front	: Side	
A, m	**3,0**		**6,0**		**9,0**		**12,0**		**15,0**		**18,0**		**21,0**		**Maximum Reach**		
B, m																	**R, m**
12.0															*1750	*1750	13,84
9,0									*2250	*2250					*1650	*1650	15,58
6,0							*2850	*2850	*2650	2350					*1700	*1700	16,60
3,0	*4350	*4350	*6350	*6350	*4250	*4250	*3350	3200	*2900	2150					*1850	1650	17,04
0 (Ground)	*2850	*2850	*8600	7250	*5250	4300	*3900	2850	*3150	1950					*2050	1600	16,93
-3,0	*4750	*4750	*9550	6550	*5950	3850	*4300	2600	3200	1850					*2450	1600	16,28
-6,0	*7000	*7000	*9500	6450	*6150	3700	4250	2500							3150	1850	15,00
-9,0	*9750	*9750	*8600	6750	*5700	3800	*4050	2550							*3600	2350	12,91
-12,0			*6350	*6350	*4200	4150									*3900	*3900	9,48





A Load Radius
B Load Point Height
C Lifting Capacity

1. The above loads are in compliance with SAE J1097 and ISO 10567 Hydraulic Excavator Lifting Capacity Standards
2. The load point is the center-line of the bucket pivot mounting pin on the arm
3. Lifting capacity cannot exceed 75% of tipping capacity or 87% of hydraulic capacity.
4. (*) indicates load limited by hydraulic capacity.

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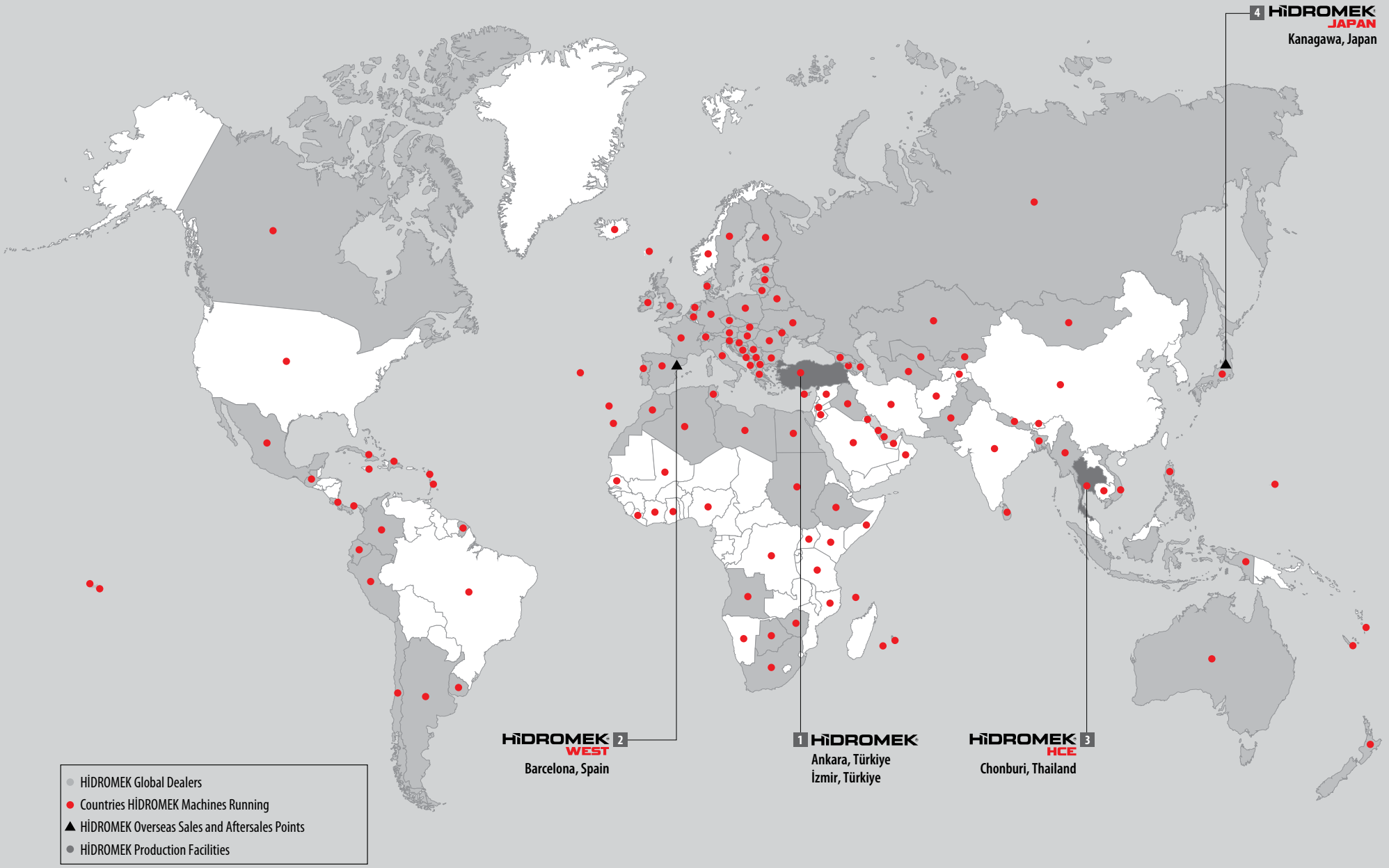

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