

 **BAEKKUN**

Amphibious Excavator

BKEX80R / BKEX140 / BKEX225

BKEX260 / BKEX300 / BKEX340

 **BAEKKUN**

ADVANCED
SPECIAL
ENGINEERING &
CONSTRUCTION
COMPANY

BAEKKUN Dredging

- Company Introduction
- Certificate & Patent



BAEKKUN



We treasure the avalue of the Enviroment and Future

Baekkun Dredging co., Ltd





Company Introduction

Our company has supplied our customers with high technologized dredgers, especially amphibian cutter suction dredger, which has been using for a decade with satisfaction.

Baekkun has many cerificates of patent of amphibian dredgerm and also our products and dredging works are all eco-friendly.

Furthermore our company promise to do our best to probide the high-tech & high quality products and experienced fod several decades.

Thank you.



Certificate & Patent

Approval List for Welding Procedure Specification

Company Address		BAEKKUN DREDGING CO., LTD. 12 Gagok-gil, Suncheon-si, Jeollanam-do, Korea		Applicable Rules / Standard Date of Initial Approval	KR Rule 26 July, 2016					
No.	Cert. No.	WPS Information		Welding technique			Base metal		Welding consumables	
		WPS No. Rev. No.	Supporting PQR No.	Welding Process	Joint Type	Welding Position	Material Grade	Plate & Pipe Thickness (mm)	Pipe out- Diameter (mm)	Brand name Maker
1	YSUWD-0006-16	BK-G-001 0	QBK-G-001	FCAW	Butt_Plate	2G	A	3 - 18	-	SF-71 HYUNDAI WELDING
2	YSUWD-0007-16	BK-G-002 0	QBK-G-002	FCAW	Butt_Plate	3G-UP	A	3 - 20	-	SF-71 HYUNDAI WELDING

Remarks
1. Welding procedures qualified at a manufacturer are valid for welding in workshops under the same technical and quality management.
2. It is to be the manufacturer's responsibility to establish and document whether a procedure is suitable for the particular application.

THIS IS TO CERTIFY that the above mentioned welding procedures have been approved on the basis of the welding procedure qualification test supervised by the surveyor of Korean Register of Shipping and specified in a welding procedure specification, in accordance with the relevant requirement of this Society's Rules and/or of the recognized standard as follows.

Pl. 2, Ch. 2, Sec. 4 of the Rules for Classification of Steel Ships.

KOREAN REGISTER OF SHIPPING
SURVEYOR (0881 Kim Jong-sun)

Issued Date :
Issued Office : Yeosu-Gwangyang Branch Office (Tel.070-8799-7818 / 7858 , Fax.070-8799-7819)

Form AW-03(2015.12) Page 1 of 1 <http://www.krs.co.kr>

제 20170108479 호

벤처기업확인서

업 체 명 : (주)백건건설
대 표 자 : 백도선
소 재 지 : 전라남도 순천시 별량면 별량길 192-2
확 인 유 형 : 기술보충기금(기술보충기금)
명 가 기 관 : 기술보충기금
유효 기 간 : 2017.07.16일 ~ 2019년07.16일

위 업체는 벤처기업육성에관한특별조치법 제25조의 규정에 의하여 벤처기업임을 확인합니다.

2017년 07월 16일

기술보충기금 이사장

제 5474 호

상 장

(주)백건건설

위는 내수기업의 수출기업화 및 중소기업 수출 촉진을 위한 '수출 우수 사례 경진대회' 에서 우수한 성적으로 입상하였기에 이 상을 드립니다.

2016년 12월 15일

중소기업청장 주영섭

디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0614554 호
REGISTRATION NUMBER: 30-0614554
출원일: 2016년 04월 21일
등록일: 2016년 09월 23일
출원인: 백도선(780220-1)*****

디자인의 대상이 되는 물건 (ARTICLE THAT IS THE OBJECT OF THE DESIGN)
순환식의 손잡이

디자인권자 (OWNER OF THE DESIGN RIGHT)
등록사명함에 기재

발명자 (INVENTOR)
백도선(780220-1*****)
전남 순천시 별량면 상삼리 630-12 / 303

위의 창작은 「디자인보호법」 에 의하여 디자인등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)
2016년 09월 23일

디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0614556 호
REGISTRATION NUMBER: 30-0614556
출원일: 2016년 04월 21일
등록일: 2016년 09월 23일
출원인: 백도선(780220-1)*****

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수확장용 손잡이

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등록사명함에 기재

발명자 (INVENTOR)
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(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)
2016년 09월 23일

디자인등록증

CERTIFICATE OF DESIGN REGISTRATION

등록 제 30-0625401 호
REGISTRATION NUMBER: 30-0625401
출원일: 2016년 04월 21일
등록일: 2016년 12월 12일
출원인: 백도선(780220-1)*****

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순환식의 커리키

디자인권자 (OWNER OF THE DESIGN RIGHT)
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백도선(780220-1*****)
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(THIS IS TO CERTIFY THAT THE DESIGN IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)
2016년 12월 12일

특허증

CERTIFICATE OF PATENT

특허 제 10-0922414 호
PATENT NUMBER: 10-0922414
출원일: 2009년 09월 12일
등록일: 2009년 12월 12일
출원인: 백도선(780220-1)*****

발명의명칭 (TITLE OF THE INVENTION)
전환식 수중 운반 장치 및 방법

특허권자 (PATENTEE)
등록사명함에 기재

발명자 (INVENTOR)
백도선(780220-1*****)
전남 순천시 별량면 상삼리 630-12 / 303

위의 발명은 「특허법」 에 의하여 특허등록원부에 등록되었음을 증명합니다.
(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)
2010년 02월 02일

특허증

CERTIFICATE OF PATENT

특허 제 10-1013508 호
PATENT NUMBER: 10-1013508
출원일: 2009년 09월 12일
등록일: 2011년 01월 31일
출원인: 백도선(780220-1)*****

발명의명칭 (TITLE OF THE INVENTION)
수확장용 손잡이

특허권자 (PATENTEE)
등록사명함에 기재

발명자 (INVENTOR)
백도선(780220-1*****)
전남 순천시 별량면 상삼리 630-12 / 303

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(THIS IS TO CERTIFY THAT THE PATENT IS REGISTERED ON THE REGISTER OF THE KOREAN INTELLECTUAL PROPERTY OFFICE.)
2011년 01월 31일

ADVANCED
SPECIAL
ENGINEERING &
CONSTRUCTION
COMPANY

BAEKKUN Dredging

- Baekkun amphibious
 - Customized features(amphibious option)
 - Reliability
 - Technical specification
 - Dimensions & working range
 - hydraulic cutter pump specification



BAEKKUN

BAEKKUN AMPHIBIOUS

ONE-STOP SHOP

One place for complete solutions :
(carrier + application + parts + service)

ENGINEERING APPROVED

Optimized for Wheel loader equipment high efficiency and performance, resulting in lower running and maintenance cost.

SERVICE

Broad coverage via the Doosan service network, fully supported by Wheel loader product specialists.

WARRANTY

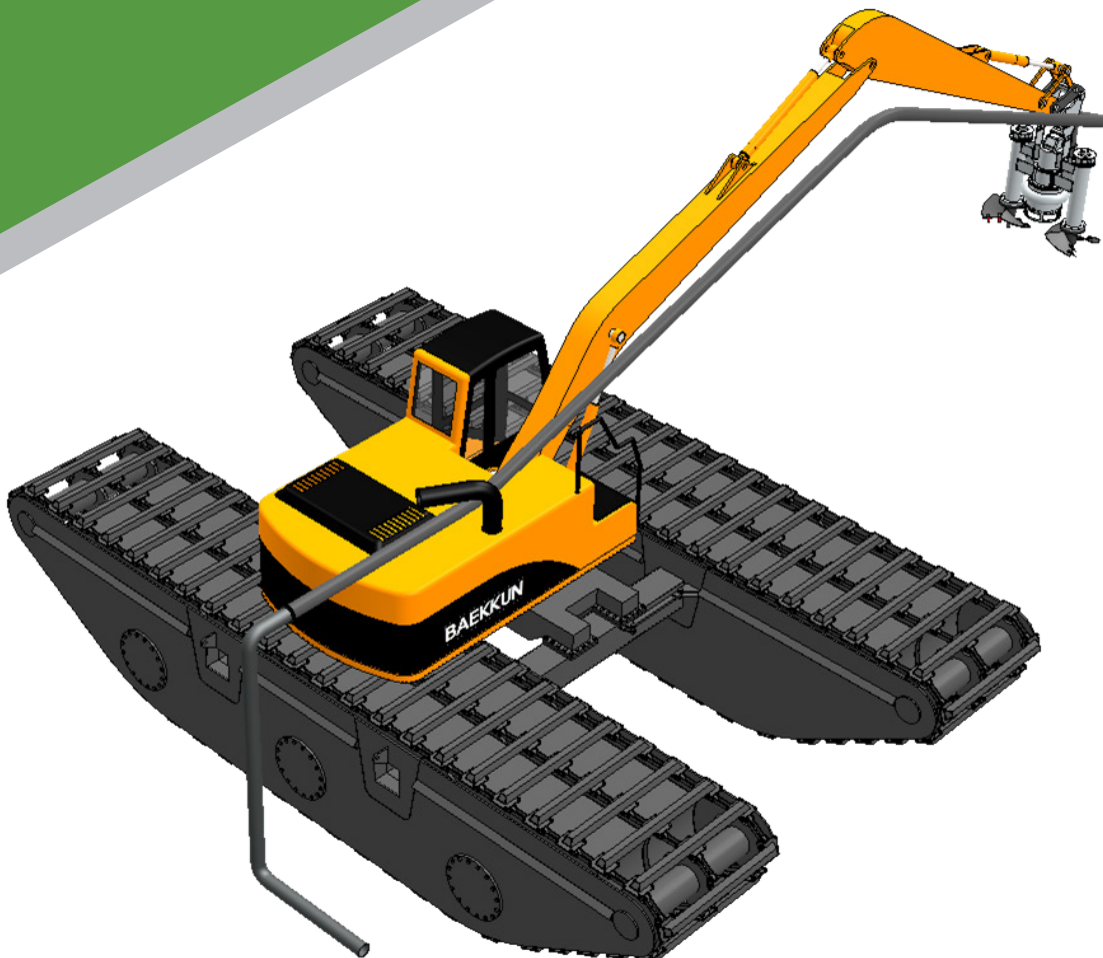
Avoid compatibility issues and operating differences from using Non-approved application.

QUALITY

Products manufactured to highest standards.

PLUG & PLAY READINESS

Easy to install and operate



BAEKKUN AMPHIBIOUS

Baekkun Amphibious is designed to enhance mobility in marshes, swampy area and soft terrain with floating pontoons. Baekkun also offer Super Long reach front kit for more deep and far digging. Using AU kit and SLR kit together, it maximizes versatility of Baekkun excavator.

BKEX80R

BKEX140

BKEX225

BKEX260

BKEX300

BKEX340

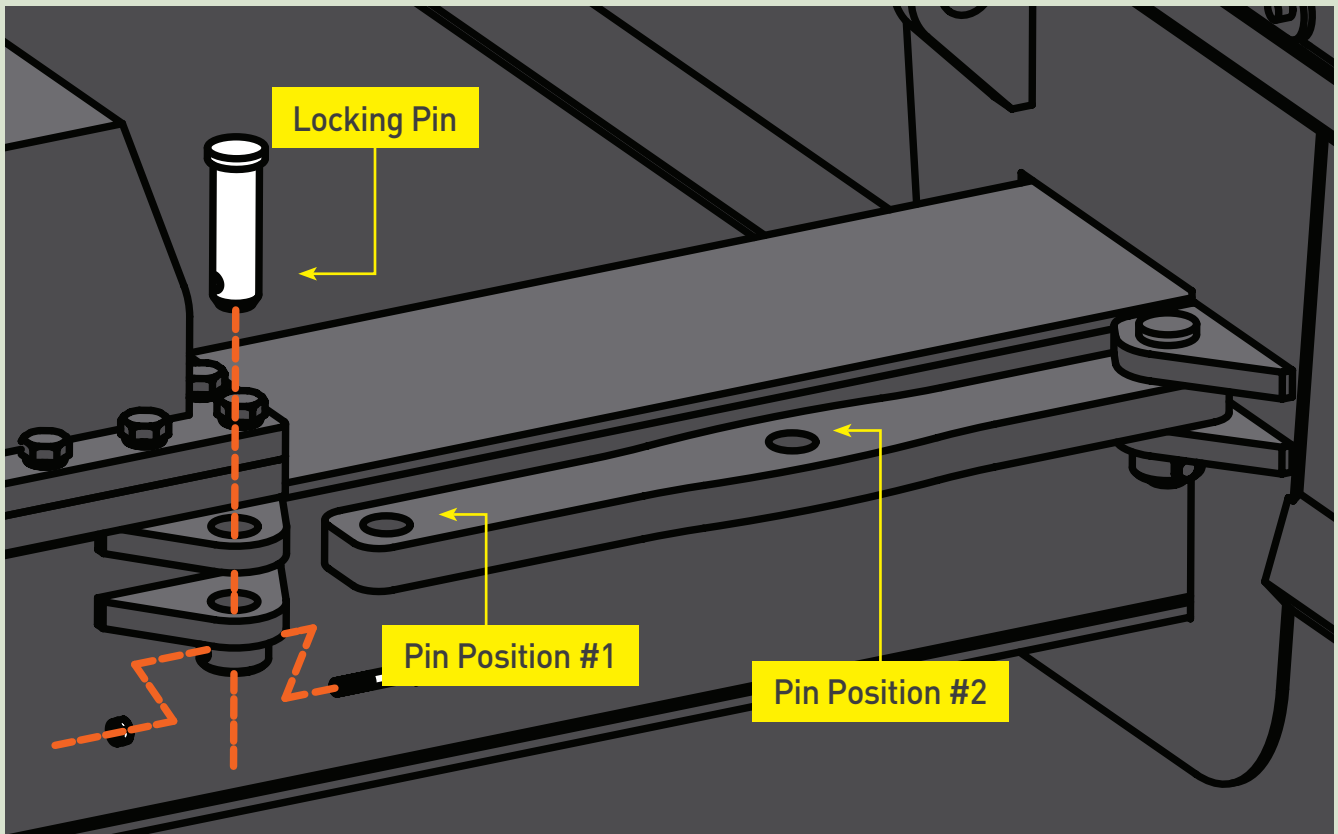
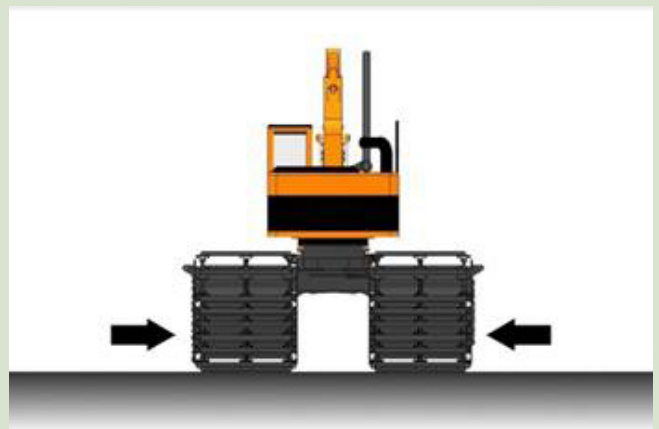
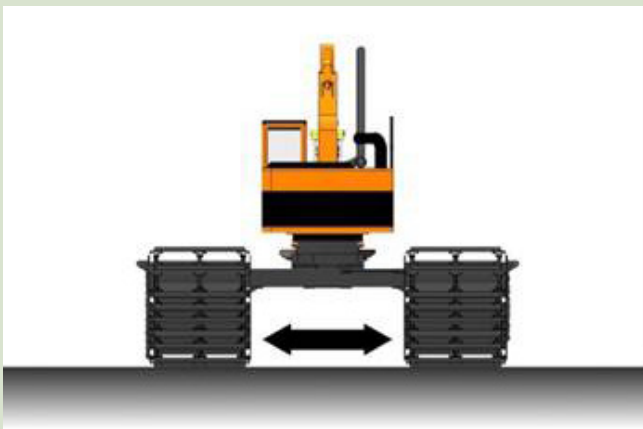


CUSTOMIZED FEATURES

- **AMPHIBIOUS OPTION**

- Non Hydraulic Extendable Amphibious (Standard) :

- For non hydraulic extendable design, there are 2 separate locking pin positions for each ponto on the horizontal mounting beams, Users can choose their desired overall track width during the installation process

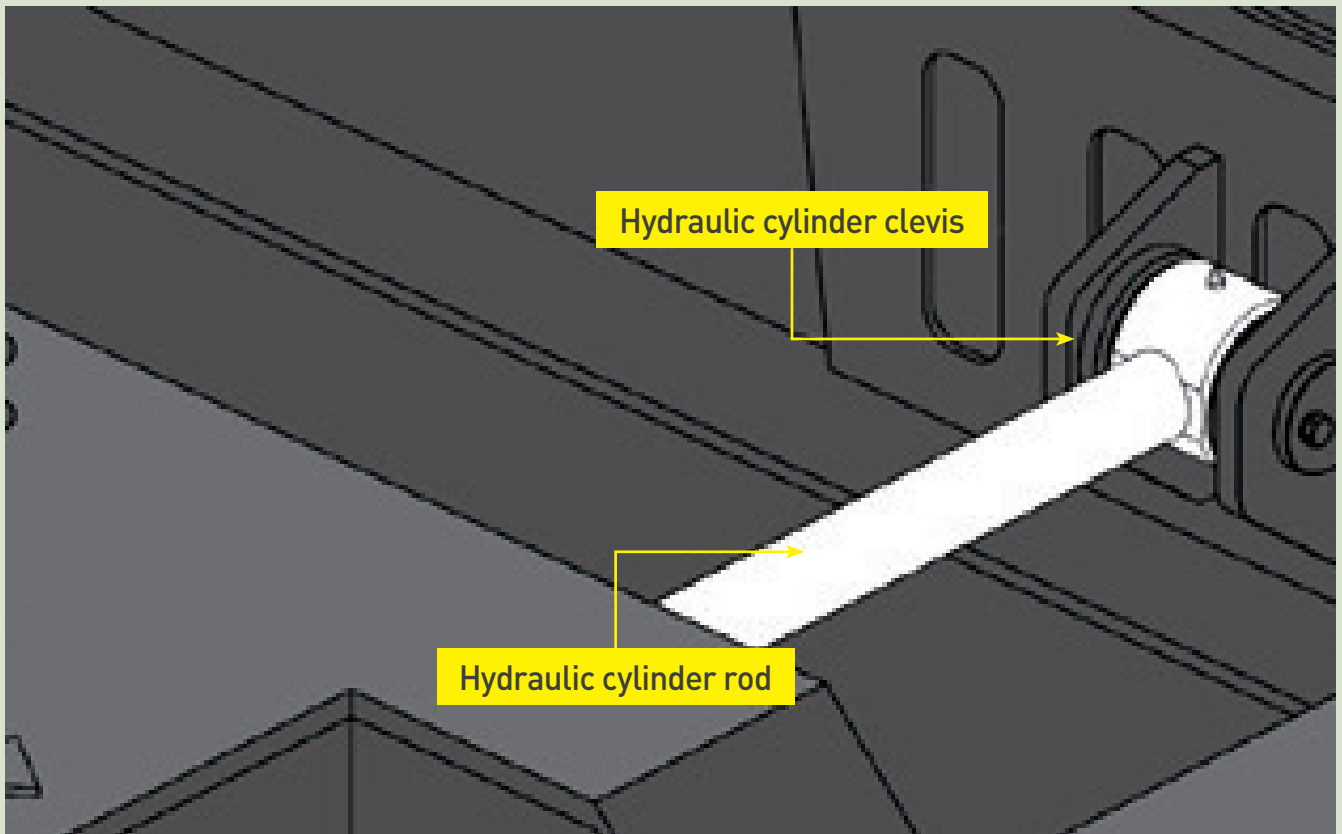
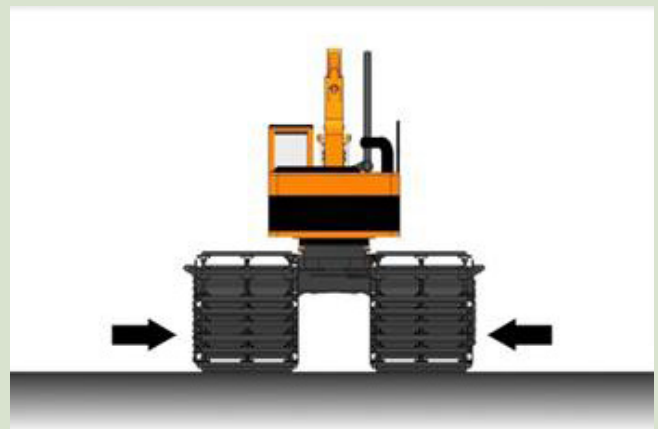
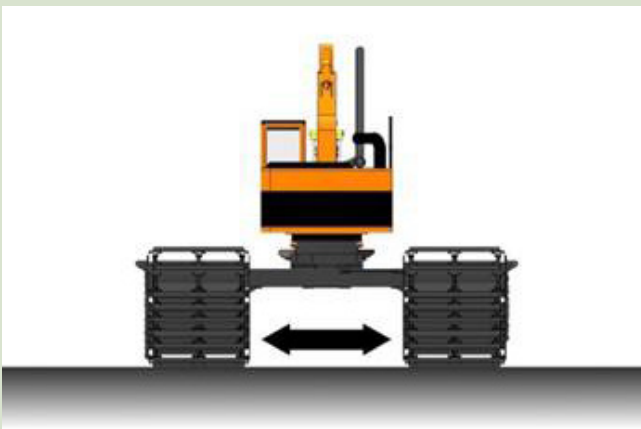


CUSTOMIZED FEATURES

- AMPHIBIOUS OPTION

- Hydraulic Extendable Amphibious & Retractable Pontoons (Optional) :

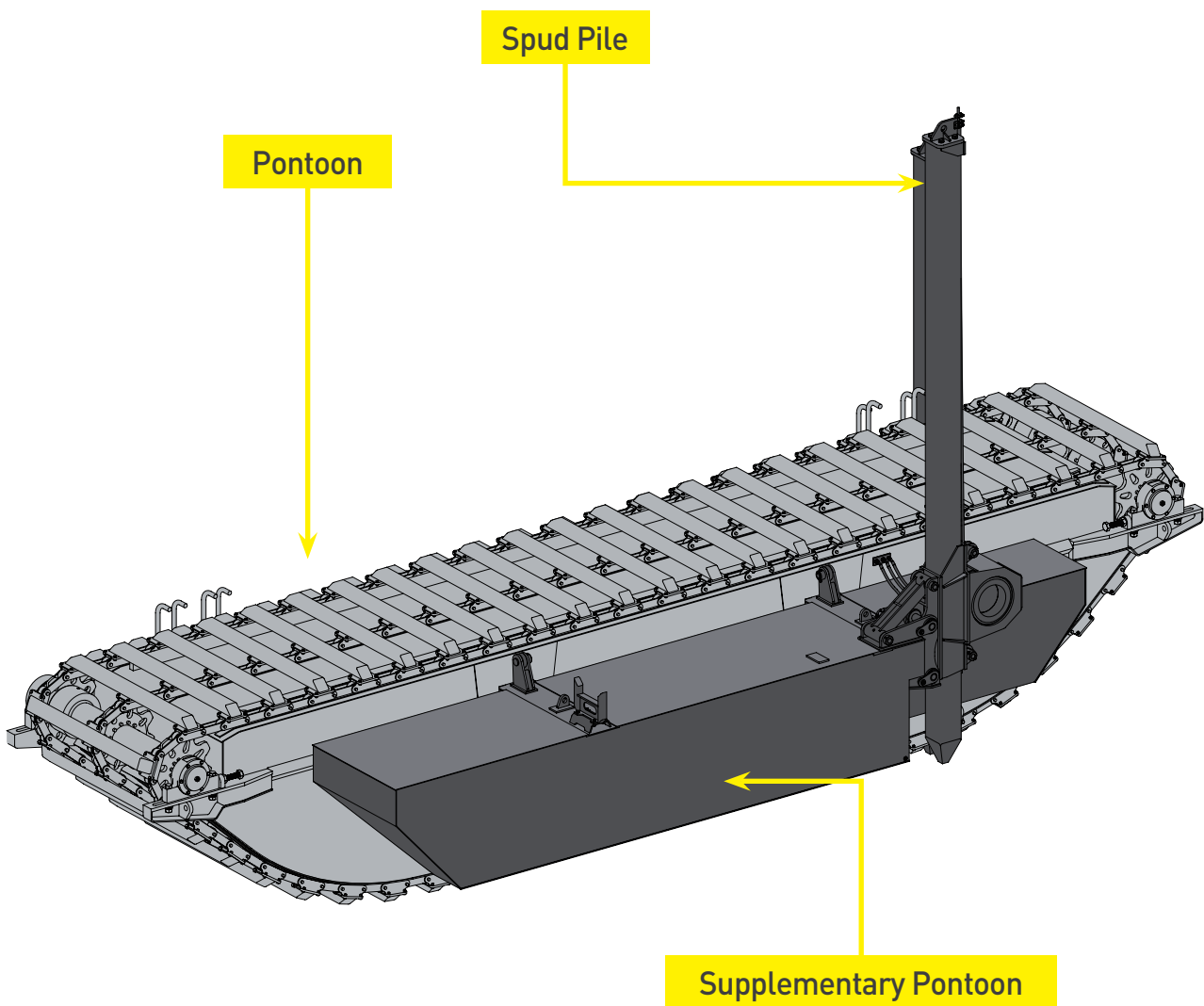
Extension and retraction of pontoons “on the fly” (model dependent), When fully extended, it offers the extra stability needed when situation calls for Fully retracted provide the flexibility of narrow track width when needs arises.



CUSTOMIZED FEATURES

• AMPHIBIOUS OPTION

SUPPLEMENTARY PONTOONS AND SPUDS (OPTIONAL)



- Supplementary pontoons can be added on each side to boost stability in deeper water operation.
- Spud piles attach to supplementary pontoons help to overcome buoyancy effect, it offers added stability and enhanced operability.
- Pontoons are designed and built with provision for future addition of supplementary pontoon and spud system.
- Future proof in design.

CUSTOMIZED FEATURES

- **AMPHIBIOUS OPTION**

SUPPLEMENTARY PONTOONS AND SPUDS (OPTIONAL)

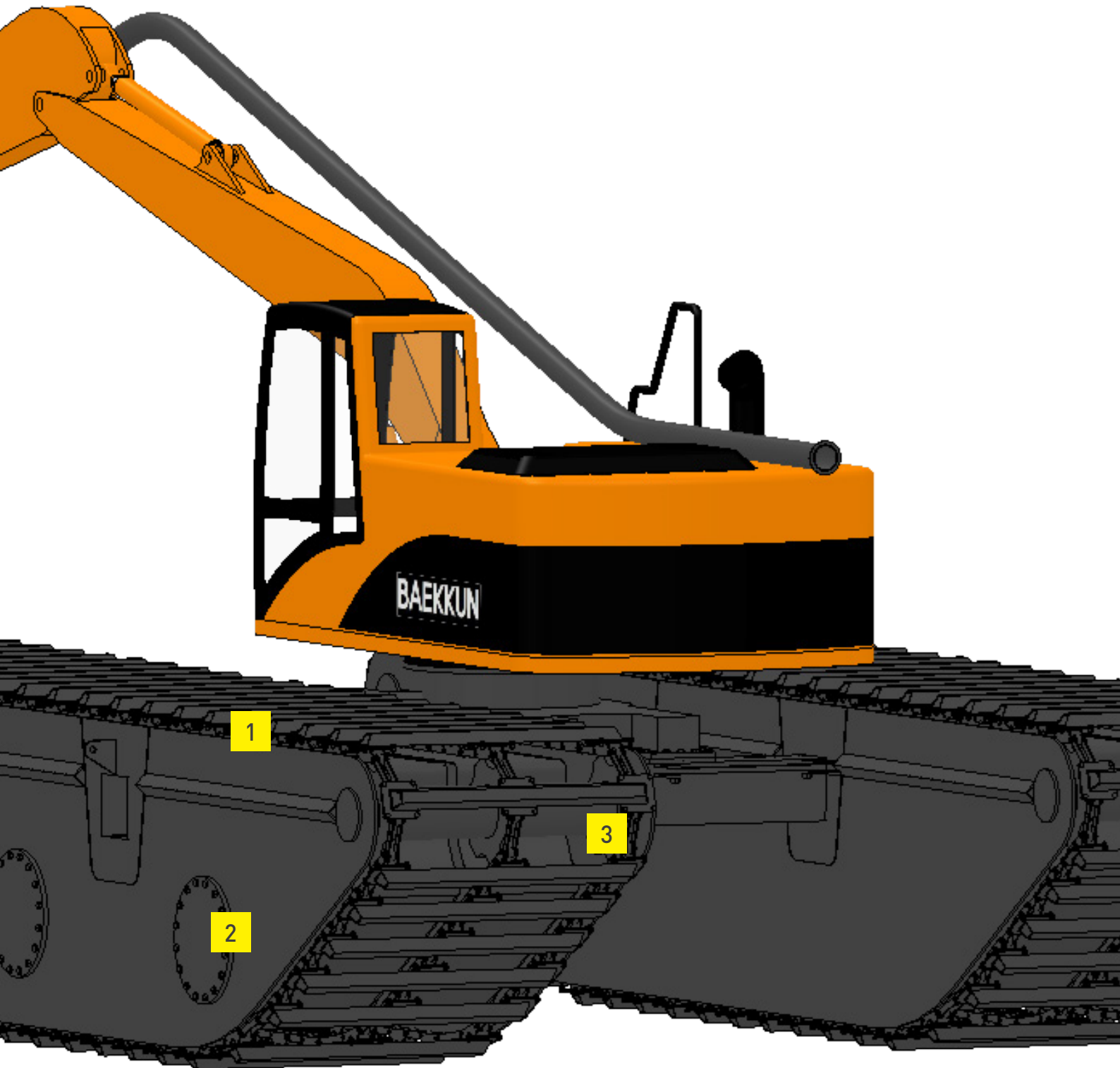
SLR kit is designed for using in drainage canal construction and preservation and Light duty excavation at long distance



RELIABILITY

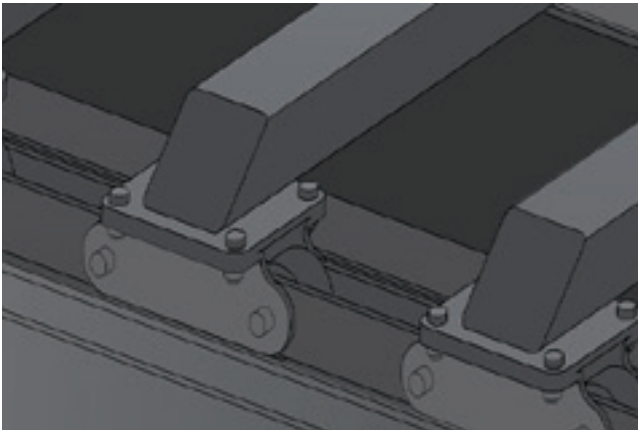
- AMPHIBIOUS OPTION

SUPPLEMENTARY PONTOONS AND SPUDS (OPTIONAL)



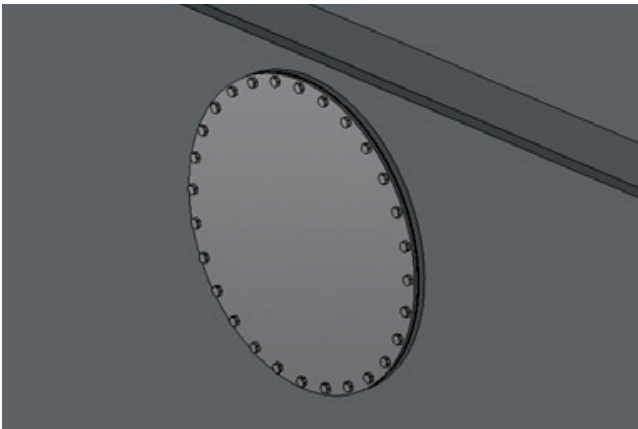
RELIABILITY

① Track System



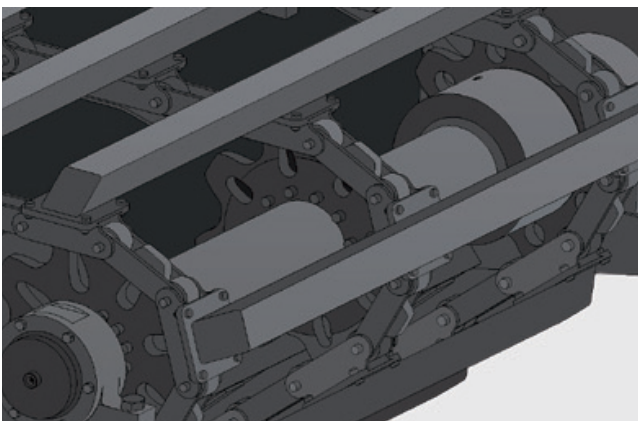
The track system (shoe, chain, roller, pin and bushing) is extremely controlled tight tolerance. The track shoe supported by multiple stands of track chains provided the advantage of uniform pulling force and superior weight distribution across each track shoe. The shape of shoe is optimized to generate the powerful thrust force under water and driving force on the ground also.

② Manhole



Regular inspection and maintenance is very easy because of manholes side pontoon. Manhole is designed most suitable position to check inside of pontoon and the size of manhole is big enough to come in and out for a operator.

③ Axle drum and Sprocket



Non weld-on sprocket design which precisely machined and bolted onto axial ensures a perfect alignment of each sprocket across the axial, a critical criterion for the longevity of the track chain.

Beakkun amphibious excavator has one of strong point compare to competitor. Travel motors are mounted on front and rear of each pontoon. It means total 4 travel motors are equipped per machine.

TECHNICAL SPECIFICATION

• BKEX80R

Engine

Model

4TNV98-ZWDB8

Number of cylinders

4

Rated horse power

39.9kW(54.2PS, 53.5HP) @2,000rpm(SAE1349, net)

Max torque

23.7kgf.m @1,300pm

Piston displacement

3,319cc

Bore & Stroke

Ø98 x 110 mm

Starter

12V / 3.0kW

Batteries

1 x 12V / 100Ah

Alternator

12V / 60A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

Single variable displacement axial piston pump with tandem gear pump. 10 spool main control valve of sandwich construction. This original design enables both independent and combined operations of all functions. Pilot joystick and pedal control type operation.

Main pumps

Variable displacement axial piston pump

-Max flow : 144l / min (38US gpm, 31.7lmp gpm)

Pilot pump

Gear pump

-Max flow : 22l / min (5.81US gpm, 4.84lmp gpm)

Maximum system pressure

Boom / Arm / Bucket : 300kgf/cm² (294bar)

Travel : 280kgf/cm² (275bar)

Swing : 220kgf/cm² (215bar)

Hydraulic Cylinders

High-strength piston rods and tubes are used.

A cylinder cushion mechanism is provided for boom and arm cylinders to assure shock-free operation and

extend the life of cylinders.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	1	115 x 70 x 775mm
Arm	1	100 x 65 x 846mm
Bucket(STD Front)	1	85 x 55 x 690mm

TECHNICAL SPECIFICATION

• BKEX80R

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is single-row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant. Swing parking brake is spring-set, hydraulic-released disc type.

Max swing torque

1,680kgf.m

Max swing speed

9.6rpm

Rear swing radius

1,300mm

Drive

Each track is driven by an independent, high-torque, axial piston motor through planetary reduction gears. Two levers of foot pedal control provide smooth travel or counter-rotation upon demand.

Travel speed (fast / slow)

- On the ground : 2.0 / 1.5km/h (1.2 / 0.9mph)

- In the water : 2.5 / 2.0km/h (1.6 / 1.2mph)

Maximum traction force (fast / slow)

- On the ground : 2.7 / 5.2ton (5,800 / 11,500lbf)

Maximum grade

- On the ground : 30° (58%)

Refill Capacities

Fuel tank

115l

Cooling system (Radiator capacity)

10l

Engine oil

11.6l

Swing drive

2l

Final drive (each)

1.2l

Hydraulic system

127l

Hydraulic tank

73l

TECHNICAL SPECIFICATION

• BKEX140

Engine

Model

"Common Rail" engine with direct fuel injection and electronic control, 4 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase III. (Tier II)

Number of cylinders

6

Rated horse power

71kW(97PS, 95HP) @1,850rpm(SAE1349, net)

Max torque

44.5kgf.m @1,400rpm

Piston displacement

5,890cc

Bore & Stroke

Ø100 x 125 mm

Starter

24V / 4.5kW

Batteries

2 x 12V / 100Ah

Alternator

24V / 60A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

The heart of the system is the e-EPOS (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

The BKEX e-EPOS is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

2 variable displacement axial piston pumps

-Max flow : 2 x 144l / min

(2 x 30.1US gpm, 2 x 25.1 lmp gpm)

Pilot pump

Gear pump

-Max flow : 27.8l / min (7.3US gpm, 6.1lmp gpm)

Maximum system pressure

Boom / Arm / Bucket :

- Normal mode : 330kgf/cm² (324bar)

- Power mode : 350kgf/cm² (343bar)

Travel : 330kgf/cm² (324bar)

Swing : 245kgf/cm² (240bar)

Hydraulic Cylinders

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	2	110 x 75 x 1,085mm
Arm	1	115 x 80 x 1,108mm
Bucket(STD Front)	1	100 x 70 x 900mm
Bucket(SLR Front)	1	85 x 55 x 690mm

TECHNICAL SPECIFICATION

• BKEX140

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

Max swing torque
3,380kgf.m

Max swing speed
10.7rpm

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.5 / 3.0km/h (2.2 / 1.9mph)
- In the water : 4.0 / 3.5km/h (2.5 / 2.2mph)

Maximum traction force (fast / slow)

- On the ground : 5.9 / 6.5ton (13,000 / 14,200lbf)

Maximum grade

- On the ground : 35° (70%)

Refill Capacities

Fuel tank
267l

Cooling system (Radiator capacity)
20l

Engine oil
25l

Swing drive
3.8l

Final drive (each)
3l

Hydraulic system
148l

Hydraulic tank
99l

TECHNICAL SPECIFICATION

• BKEX225

Engine

Model

4 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase II

Number of cylinders

6

Rated horse power

110kW (150PS, 148HP) @1,900rpm (SAE1349, net)

Max torque

61.5kgf.m @ 1,400rpm

Piston displacement

5,785cc

Bore & Stroke

Ø102 x 118 mm

Starter

24V / 4.5kW

Batteries

2 x 12V / 100Ah

Alternator

24V / 60A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

The heart of the system is the e-EPOS (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

2 variable displacement axial piston pump

-Max flow : 2 x 206.5l/min

(2 x 54.6US gpm, 2 x 45.4lmp gpm)

Pilot pump

Gear pump

-Max flow : 28.5l/min (7.5US gpm, 6.3lmp gpm)

Maximum system pressure

Boom / Arm / Bucket :

- Normal mode : 330kgf/cm² (324bar)

- Power mode : 350kgf/cm² (343bar)

Travel : 330kgf/cm² (324bar)

Swing : 270kgf/cm² (265bar)

Hydraulic Cylinders

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	2	125 x 85 x 1,260mm
Arm	1	140 x 100 x 1,450mm
Bucket(STD Front)	1	120 x 80 x 1,060mm
Bucket(SLR Front)	1	100 x 70 x 900mm

TECHNICAL SPECIFICATION

• BKEX225

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

Max swing torque
6,477kgf.m

Max swing speed
11.0rpm

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.0 / 2.5km/h (1.9 / 1.6mph)
- In the water : 3.5 / 3.0km/h (2.2 / 1.9mph)

Maximum traction force (fast / slow)

- On the ground : 4.7 / 7.6ton (10,400 / 16,700lbf)

Maximum grade

- On the ground : 40° (84%)

Refill Capacities

Fuel tank
400l

Cooling system (Radiator capacity)
24l

Engine oil
27l

Swing drive
5l

Final drive (each)
3.3l

Hydraulic system
330l

Hydraulic tank
240l

TECHNICAL SPECIFICATION

• BKEX260

Engine

Model

Mechanical engine with direct fuel injection 4 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase II

Number of cylinders

6

Rated horse power

136kW (185PS, 183HP) @1,900rpm (SAE1349, net)

Max torque

85kgf.m @ 1,400rpm

Piston displacement

8,071cc

Bore & Stroke

Ø111 x 139 mm

Starter

24V / 6.0kW

Batteries

2 x 12V / 150Ah

Alternator

24V / 60A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

The heart of the system is the e-EPOS (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

The BKEX e-EPOS is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

2 Swash plate axial piston pumps

- Max flow : 2 x 230l/min
(2 x 60.8US gpm, 2 x 50.6lmp gpm)

Pilot pump

Gear pump

- Max flow : 27l/min (7.1US gpm, 5.9lmp gpm)

Maximum system pressure

Boom / Arm / Bucket :

- Normal mode : 330kgf/cm² (324bar)
- Power mode : 350kgf/cm² (343bar)
- Travel : 365kgf/cm² (358bar)
- Swing : 275kgf/cm² (270bar)

Hydraulic Cylinders

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	2	130 x 90 x 1,355mm
Arm	1	140 x 100 x 1,705mm
Bucket(STD Front)	1	130 x 90 x 1,080mm

TECHNICAL SPECIFICATION

• BKEX260

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

- An axial piston motor with two-stage planetary reduction gear is used for the swing.
- Increased swing torque reduces swing time.
- Internal induction-hardened gear.
- Internal gear and pinion immersed in lubricant bath.
- The swing brake for parking is activated by spring and released hydraulically.

Max swing torque

9,860kgf.m

Max swing speed

10.4rpm

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.0 / 2.5km/h (1.9 / 1.6mph)
- In the water : 3.5 / 3.0km/h (2.2 / 1.9mph)

Maximum traction force (fast / slow)

- On the ground : 7.6 / 12.6ton (16,800 / 27,900lbf)

Maximum grade

- On the ground : 40° (84%)

Refill Capacities

Fuel tank

420l

Cooling system (Radiator capacity)

25l

Engine oil

24l

Swing drive

5l

Final drive (each)

4l

Hydraulic system

280l

Hydraulic tank

240l

TECHNICAL SPECIFICATION

• BKEX300

Engine

Model

Mechanical engine with direct fuel injection 4 valves per cylinder, vertical injectors, water cooled, turbo charged with air to air intercooler. The emission levels are well below the values required for phase II

Number of cylinders

6

Rated horse power

147kW (200PS, 197HP) @1,900rpm (SAE1349, net)

Max torque

86kgf.m @ 1,300pm

Piston displacement

8,071cc

Bore & Stroke

Ø111 x 139 mm

Starter

24V / 6.0kW

Batteries

2 x 12V / 150Ah

Alternator

12V / 50A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

The heart of the system is the e-EPOS (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

The BKEX e-EPOS is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

Tandem axial piston pumps

- Max flow : 2 x 247l/min
(2 x 65.3US gpm, 2 x 54.3lmp gpm)

Pilot pump

Gear pump

- Max flow : 28.5l/min (7.5US gpm, 6.3lmp gpm)

Maximum system pressure

Boom / Arm / Bucket :

- Normal mode : 330kgf/cm² (324bar)

- Power mode : 350kgf/cm² (343bar)

Travel : 330kgf/cm² (324bar)

Swing : 275kgf/cm² (270bar)

Hydraulic Cylinders

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	2	140 x 95 x 1,440mm
Arm	1	150 x 105 x 1,755mm
Bucket(STD Front)	1	140 x 90 x 1,150mm

TECHNICAL SPECIFICATION

• BKEX300

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is single row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant.

Max swing torque

10,363kgf.m

Max swing speed

9.9pm

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.0 / 2.5km/h (1.9 / 1.6mph)

- In the water : 3.5 / 3.0km/h (2.2 / 1.9mph)

Maximum traction force (fast / slow)

- On the ground : 7.1 / 11.4ton (15,600 / 25,000lbf)

Maximum grade

- On the ground : 40° (84%)

Refill Capacities

Fuel tank

500l

Cooling system (Radiator capacity)

35l

Engine oil

31.5l

Swing drive

6l

Final drive (each)

7l

Hydraulic system

310l

Hydraulic tank

280l

TECHNICAL SPECIFICATION

• BKEX340

Engine

Model

4-Cycle Air-To-Air Intercooler In-line
Water-Cooled, Direct Injection, Tier II

Number of cylinders

6

Rated horse power

185kW (252PS, 247HP) @1,800rpm (SAE1349, net)

Max torque

114kgf.m @ 1,400rpm

Piston displacement

11,051cc

Bore & Stroke

Ø123 x 155 mm

Starter

24V / 6.0kW

Batteries

2 x 12V / 150Ah

Alternator

12V / 50A

Air cleaner

Double element with auto dust evacuation

Hydraulic System

The heart of the system is the e-EPOS (Electronic Power Optimizing System). It allows the efficiency of the system to be optimized for all working conditions and minimizes fuel consumption.

The BKEX e-EPOS is connected to the engine electronic control via a data transfer link to harmonize the operation of the engine and hydraulics.

- The hydraulic system enables independent or combined operations.
- Two travel speeds offer either increased torque or high speed tracking.
- Cross-sensing pump system for fuel savings.
- Auto deceleration system.
- Two operating modes, two power modes.
- Button control of flow in auxiliary equipment circuits.
- Computer-aided pump power control.

Main pumps

Parallel bent axis piston pumps

- Max flow : 2 x 274l/min
(2 x 72.4US gpm, 2 x 60.3lmp gpm)

Pilot pump

Gear pump

- Max flow : 22.5l/min (5.9US gpm, 4.9lmp gpm)

Maximum system pressure

Boom / Arm / Bucket :

- Normal mode : 330kgf/cm² (324bar)

- Power mode : 350kgf/cm² (343bar)

Travel : 330kgf/cm² (329bar)

Swing : 275kgf/cm² (270bar)

Hydraulic Cylinders

The piston rods and cylinder bodies are made of high-strength steel. A shock absorbing mechanism is fitted in all cylinders to ensure shock-free operation and extend piston life.

Cylinders	Quantity	Bore diameter x Rod diameter x Stroke
Boom	2	150 x 100 x 1,430mm
Arm	1	170 x 120 x 1,805mm
Bucket(STD Front)	1	150 x 100 x 1,300mm

TECHNICAL SPECIFICATION

• BKEX340

Pontoon Undercarriage system

The pontoon undercarriage system is designed to be able to float on water as an added safety feature. It has 3 watertight compartments, hermetically sealed with individual manholes for easy access from the outside for inspection and preventive maintenance.

Swing Mechanism

High-torque, axial piston motor with planetary reduction gear bathed in oil. Swing circle is single row, shear type ball bearing with induction-hardened internal gear. Internal gear and pinion gear immersed in lubricant.

Max swing torque

11,660kgf.m

Max swing speed

8.9 rpm

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.0 / 2.5km/h (1.9 / 1.6mph)

- In the water : 3.5 / 3.0km/h (2.2 / 1.9mph)

Maximum traction force (fast / slow)

- On the ground : 11.4 / 19.0ton (25,200 / 41,800lbf)

Maximum grade

- On the ground : 40° (84%)

Refill Capacities

Fuel tank

550l

Cooling system (Radiator capacity)

34l

Engine oil

28l

Swing drive

6l

Final drive (each)

5.5l

Hydraulic system

440l

Hydraulic tank

380l

TECHNICAL SPECIFICATION

• BKEX340

Drive

Each track is driven by an independent axial piston motor through a planetary reduction gearbox. Two levers with control pedals guarantee smooth travel with counter-rotation on demand.

Travel speed (fast / slow)

- On the ground : 3.0 / 2.5km/h (1.9 / 1.6mph)
- In the water : 3.5 / 3.0km/h (2.2 / 1.9mph)

Maximum traction force (fast / slow)

- On the ground : 11.4 / 19.0ton (25,200 / 41,800lbf)

Maximum grade

- On the ground : 40° (84%)

Refill Capacities

Fuel tank

550l

Cooling system (Radiator capacity)

34l

Engine oil

28l

Swing drive

6l

Final drive (each)

5.5l

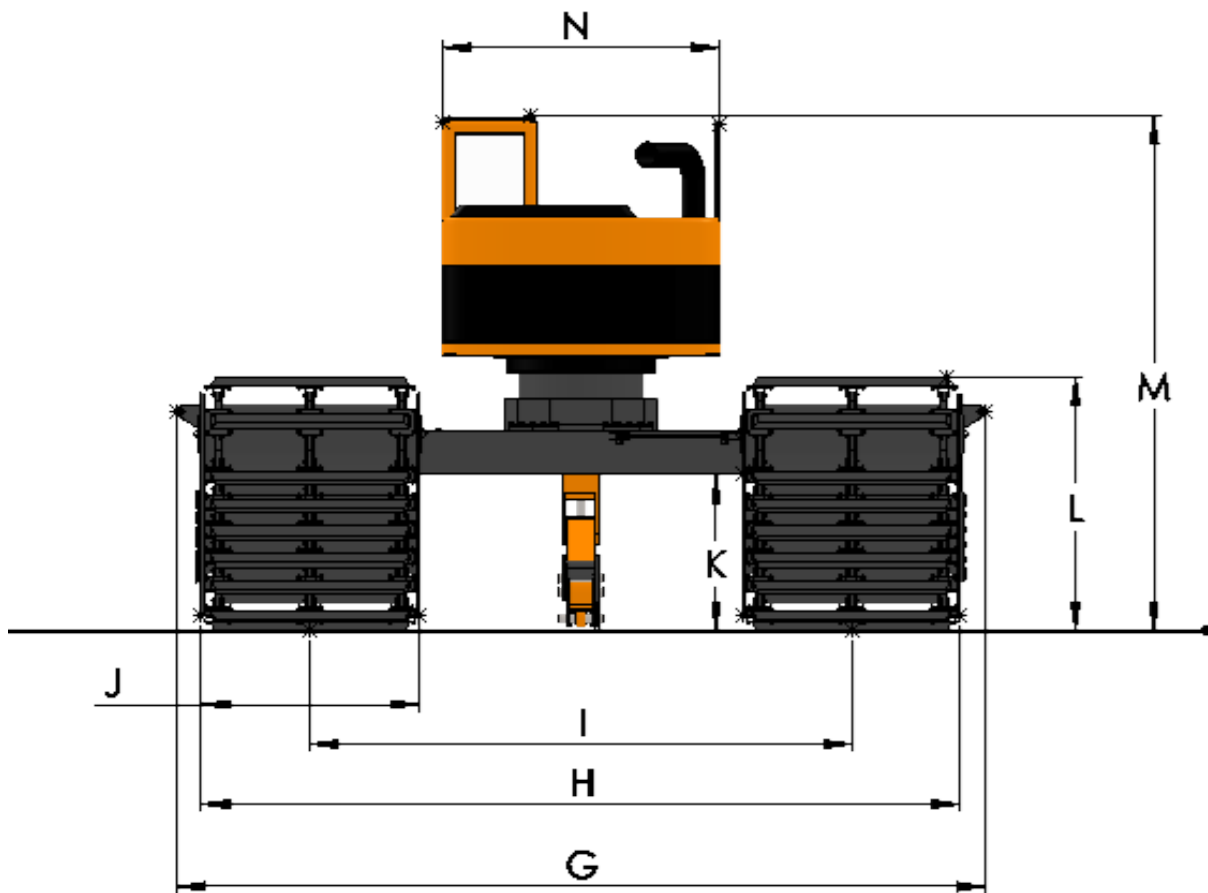
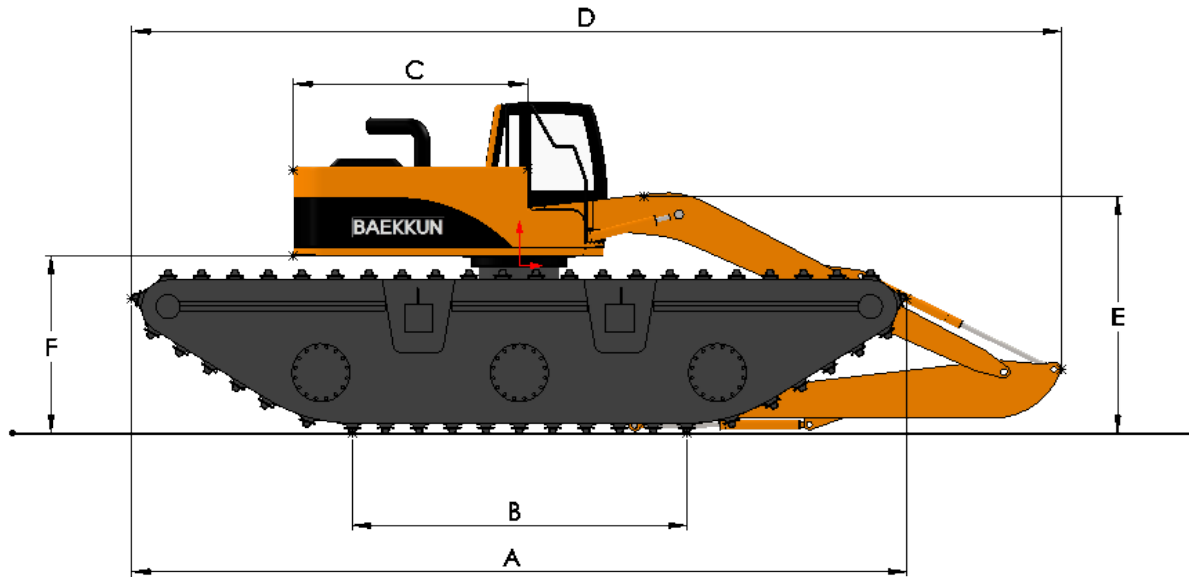
Hydraulic system

440l

Hydraulic tank

380l

DIMENSIONS & WORKING RANGE

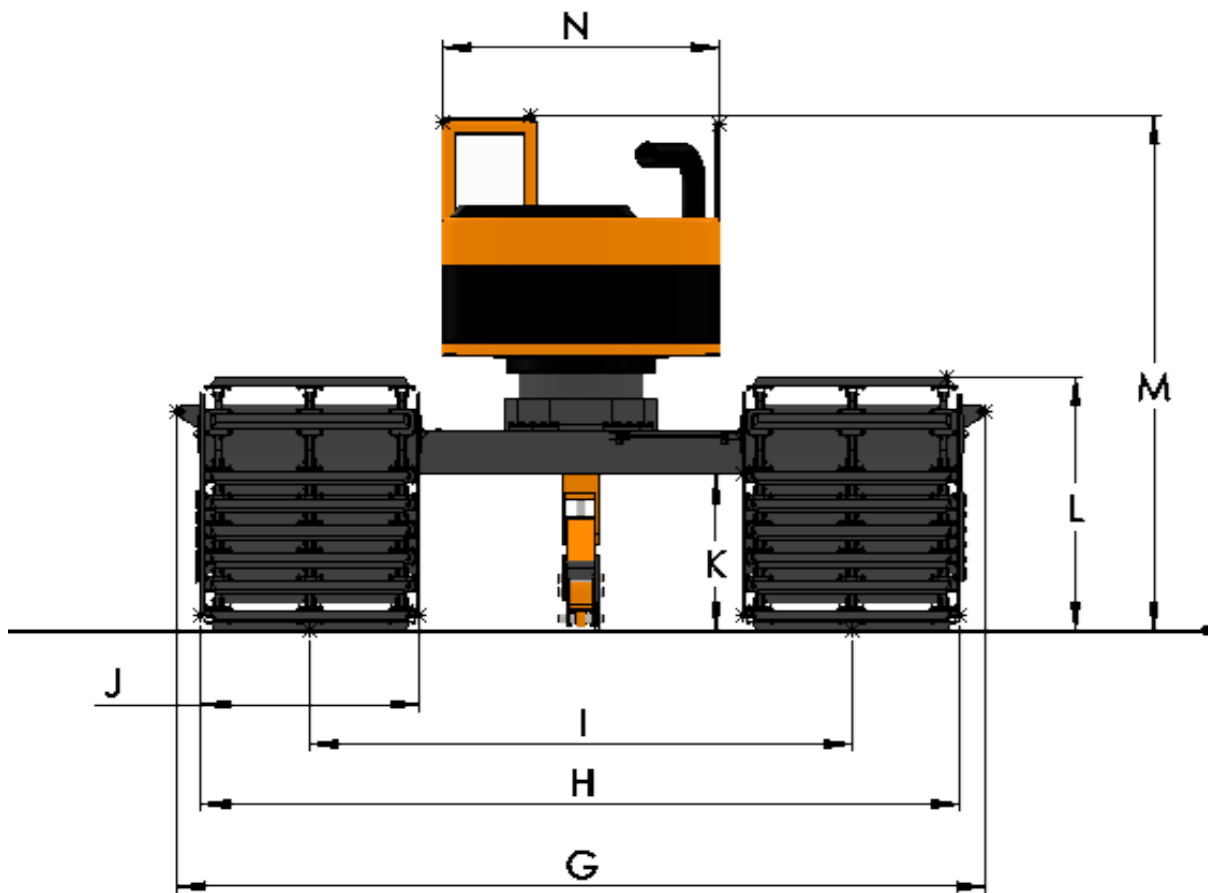
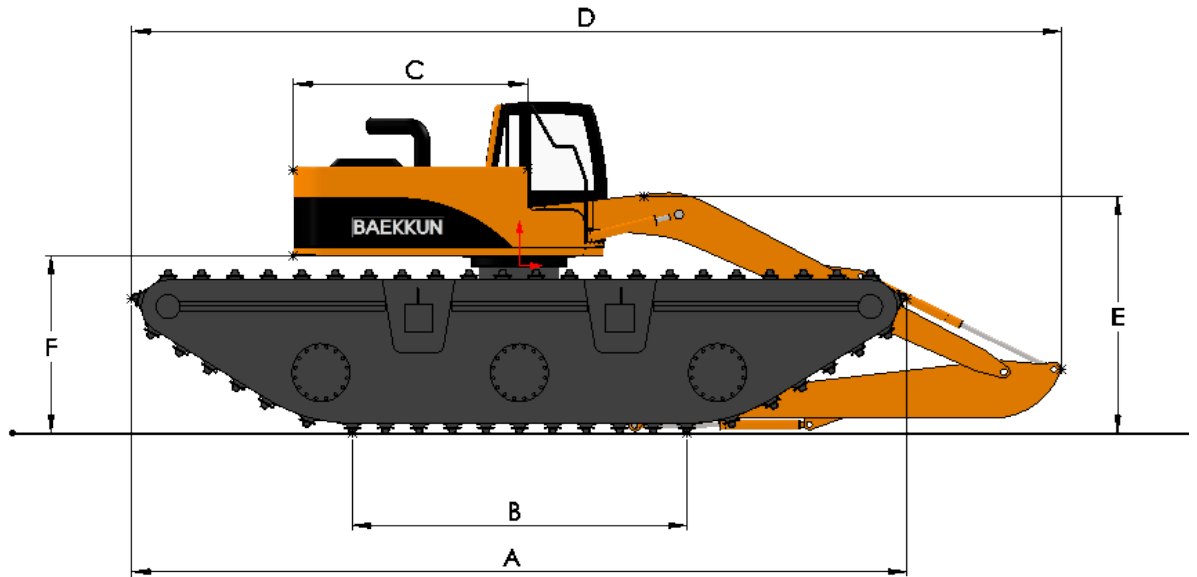


DIMENSIONS & WORKING RANGE

• With STD Front

Dimensions	Description	unit	Baekkun Amphibious Models					
			BKEX80R	BKEX140	BKEX225	BKEX260	BKEX300	BKEX340
A	Max. Track Length	mm	7,000	9,290	9,630	9,630	10,840	11,840
B	Track Length on Ground	mm	3,200	4,500	4,150	4,150	5,000	5,200
C	Rear Upper Structure Length	mm	1,300	2,200	2,750	2,995	3,200	3,500
D	Overall Length	mm	7,825	9,865	11,150	11,490	12,450	13,300
E	Height of Boom	mm	2,410	2,915	3,375	3,460	3,730	3,705
F	Counterweight Clearance	mm	1,635	1,835	2,170	2,200	2,240	2,275
G	Overall Width, min/max	mm	2,990 / 3,790	4,220 / 5,320	4,800 / 6,280	5,470 / 6,910	6,200 / 7,200	6,270 / 7,270
H	Undercarriage width, min/max	mm	2,990 / 3,790	3,950 / 5,050	4,470 / 5,950	5,170 / 6,610	5,910 / 6,910	5,970 / 6,970
I	Track Gauge, min/max	mm	1,860 / 2,660	2,500 / 3,600	2,850 / 4,330	3,250 / 4,690	3,990 / 4,990	4,020 / 5,020
J	Track Cleat Width	mm	1,100	1,450	1,620	1,920	1,920	1,950
K	Min. Ground Clearance	mm	1,030	1,140	1,300	1,300	1,300	1,130
L	Track Height	mm	1,550	1,690	2,030	2,030	2,030	2,030
M	Overall Cabin Height	mm	3,540	3,720	4,090	4,060	4,155	4,205
N	Upper Structure Overall Width	mm	2,266	2,540	2,710	2,710	2,960	2,990

DIMENSIONS & WORKING RANGE

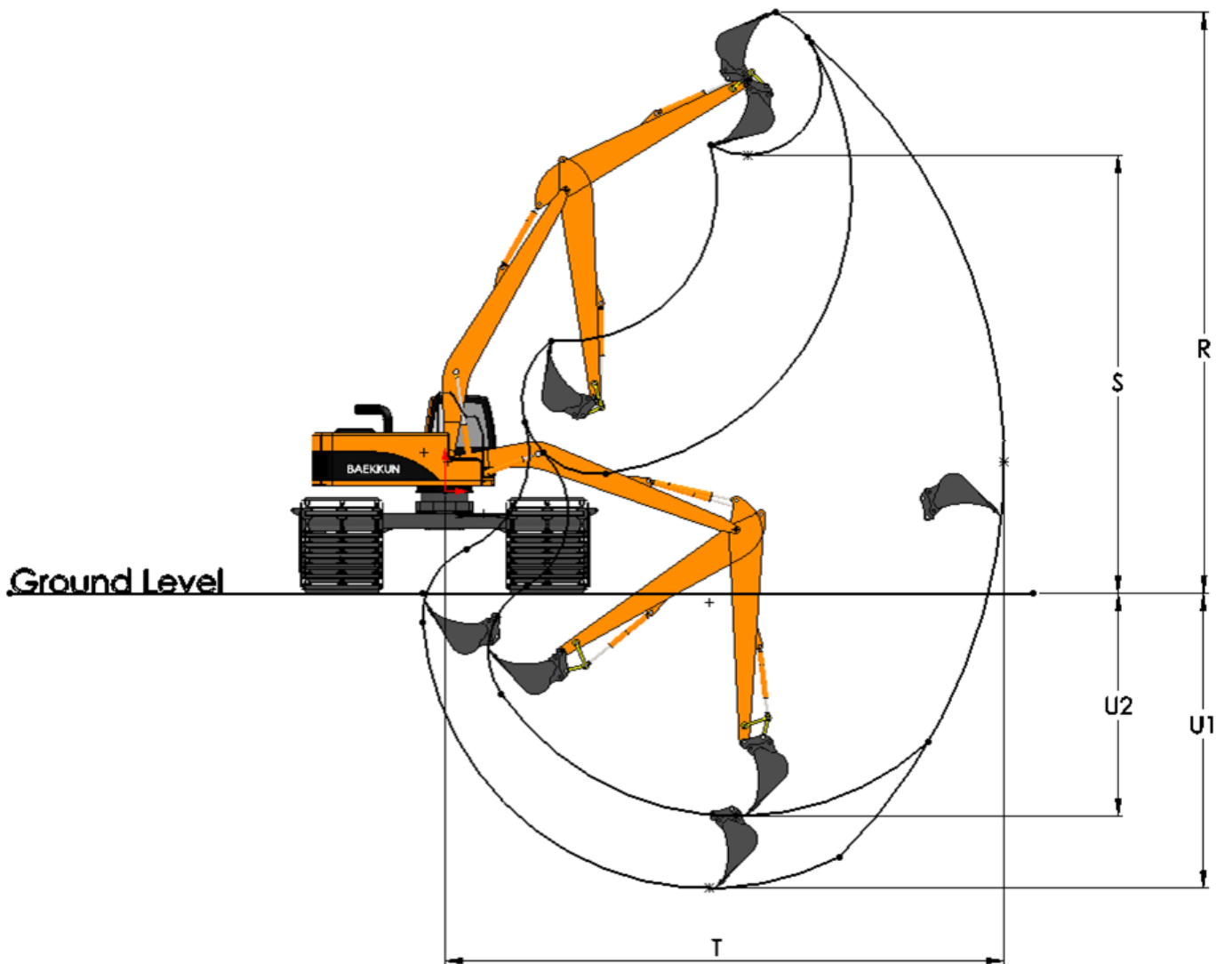


DIMENSIONS & WORKING RANGE

• With SLR Front

Dimensions	Description	unit	Baekkun Amphibious Models	
			BKEX140	BKEX225
A	Max. Track Length	mm	9,290	9,630
B	Track Length on Ground	mm	4,500	4,150
C	Rear Upper Structure Length	mm	2,200	2,750
D	Overall Length	mm	12,240	13,550
E	Height of Boom	mm	2,950	3,470
F	Counterweight Clearance	mm	1,835	2,170
G	Overall Width, min/max	mm	4,220 / 5,320	4,800 / 6,280
H	Undercarriage width, min/max	mm	3,950 / 5,050	4,470 / 5,950
I	Track Gauge, min/max	mm	2,500 / 3,600	2,850 / 4,330
J	Track Cleat Width	mm	1,450	1,620
K	Min. Ground Clearance	mm	1,140	1,300
L	Track Height	mm	1,690	2,030
M	Overall Cabin Height	mm	3,720	4,090
N	Upper Structure Overall Width	mm	2,540	2,710

DIMENSIONS & WORKING RANGE



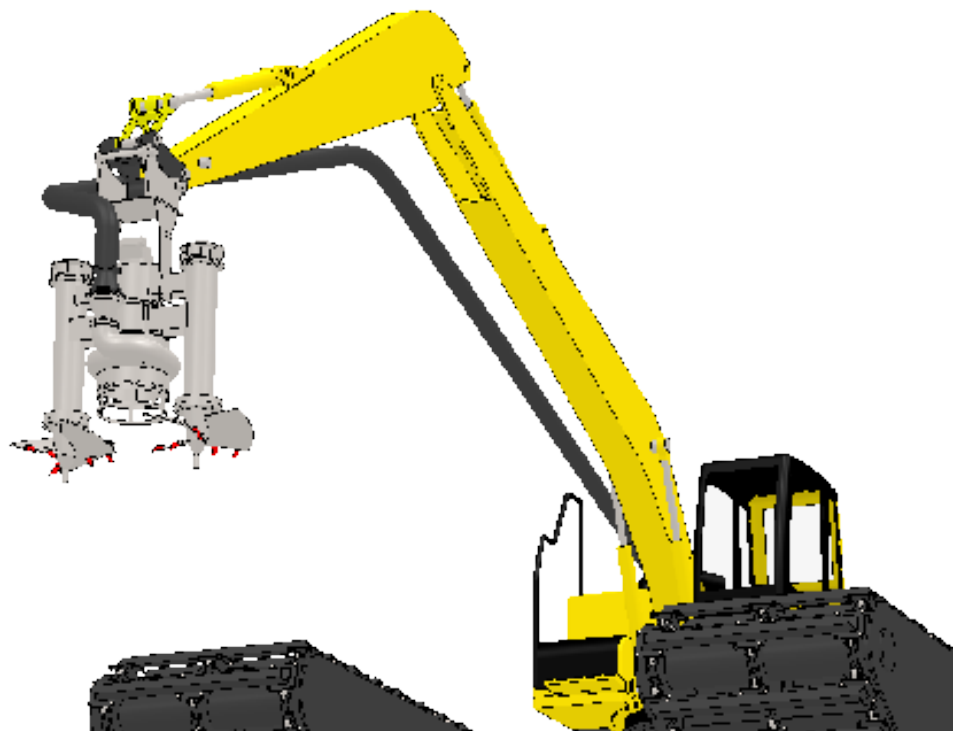
DIMENSIONS & WORKING RANGE

• With STD Front

Dimensions	Description	unit	Baekkun Amphibious Models					
			BKEX80R	BKEX140	BKEX225	BKEX260	BKEX300	BKEX340
R	Max. Cutting Height	mm	7,875	9,685	10,985	10,935	11,500	11,930
S	Max. Loading Height	mm	5,890	7,355	8,265	8,250	8,455	8,740
T	Recommended Outreach	mm	7,035	8,315	9,965	10,225	10,830	11,505
U1	Max. Digging Depth (on Front)	mm	3,830	5,210	6,105	6,225	6,920	7,210
U2	Max. Digging Depth (on Side)	mm	3,130	3,660	4,180	4,070	4,775	5,200

• With SLR Front

Dimensions	Description	unit	Baekkun Amphibious Models	
			BKEX140	BKEX225
R	Max. Cutting Height	mm	12,500	14,500
S	Max. Loading Height	mm	11,500	13,000
T	Recommended Outreach	mm	12,000	14,000
U1	Max. Digging Depth (on Front)	mm	7,500	8,500
U2	Max. Digging Depth (on Side)	mm	6,950	7,200



HYDRAULIC CUTTER PUMP SPECIFICATION

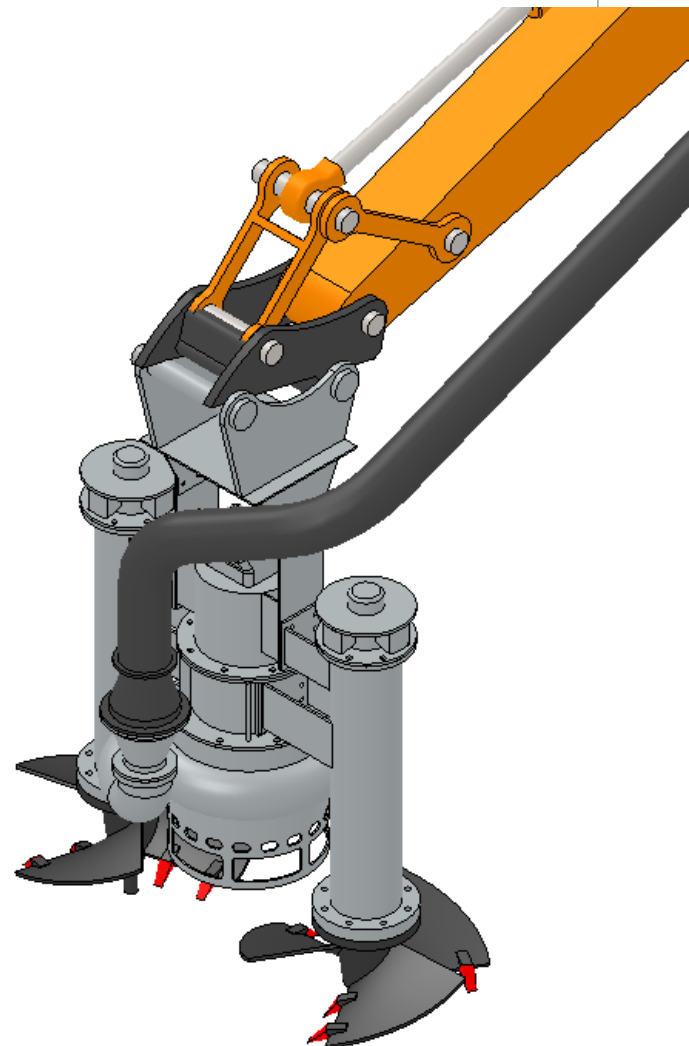
• BKCP 50HC

Technical specifications :

Delivery	150mm / 6inch
Capacity	250m ³ /hr / 1,101gpm
Head	21m / 69ft
HP/kW	35-50 HP / 25-37kW
R.P.M	980-1,180
Solid Handling	60mm / 2.4inch
Weight	700kg / 1,545Lbs

Main features :

All Pumps have standard high efficiency agitator to lift settled solids.
High abrasion resistance with high chrome wear parts.
Low rotation speed to reduce wear effect.



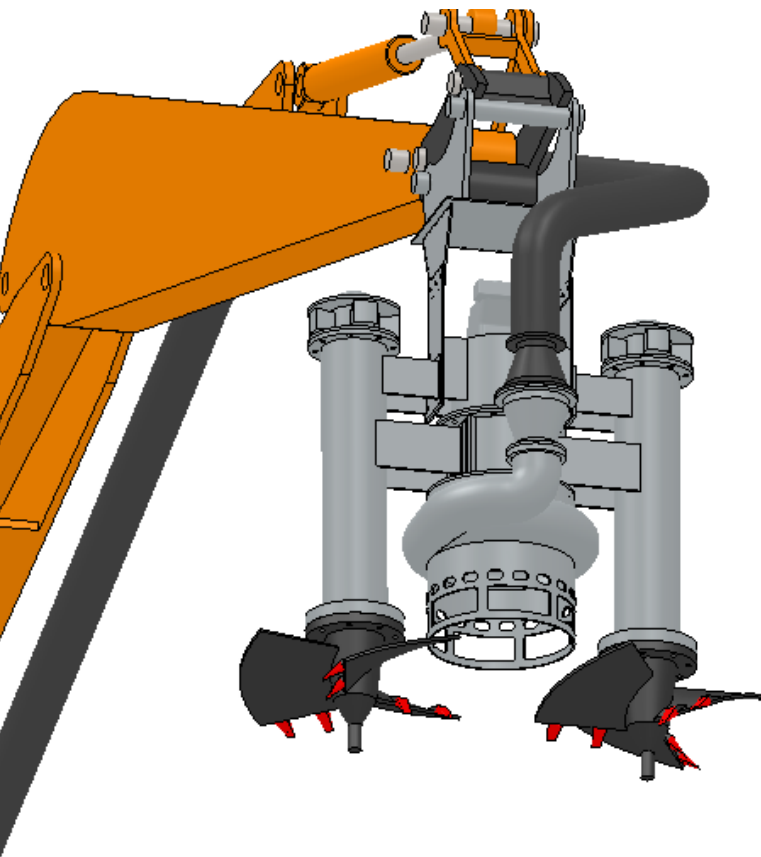
HYDRAULIC CUTTER PUMP SPECIFICATION

• BKCP 85HC

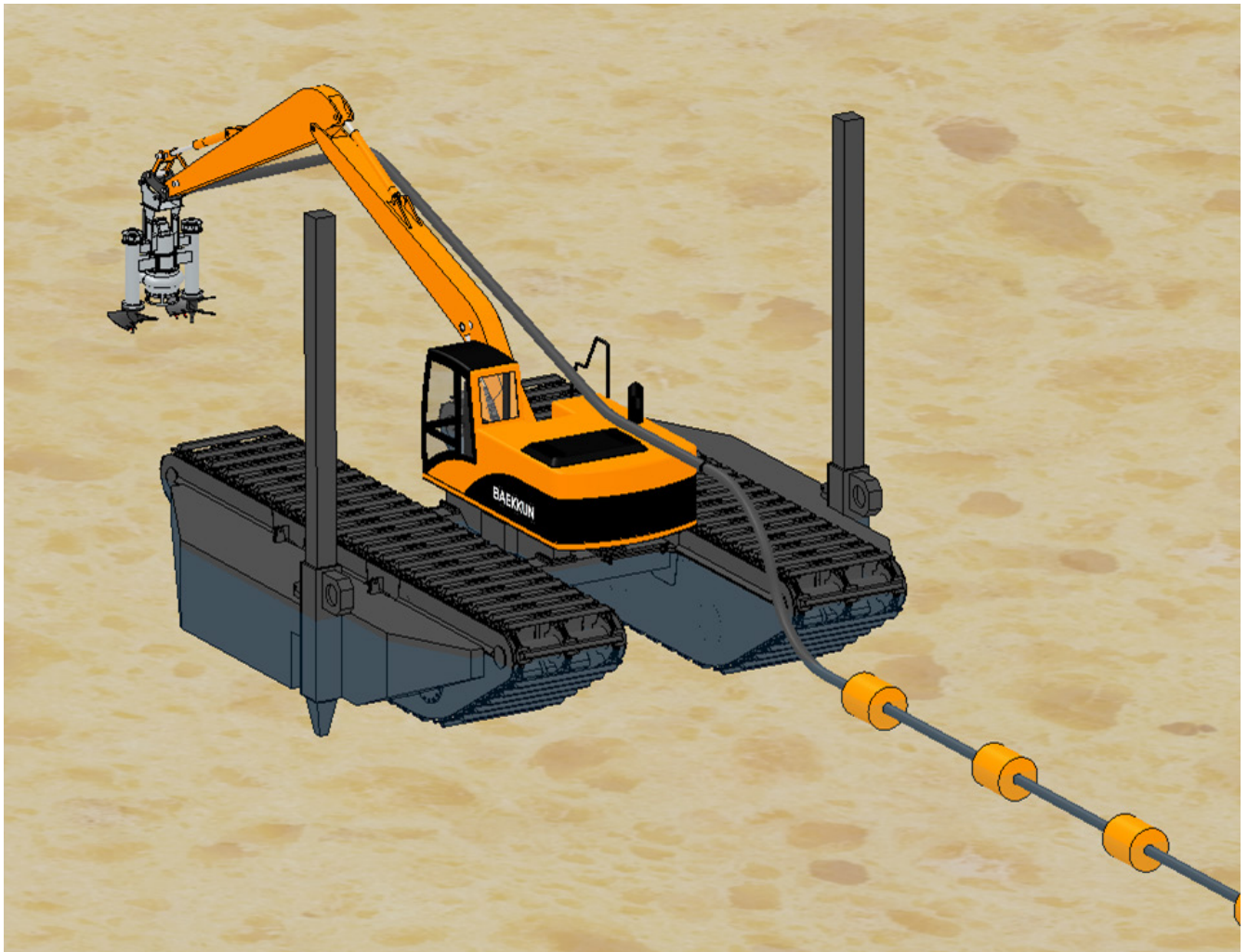
Technical specifications :	
Delivery	250mm / 10inch
Capacity	720m ³ /hr / 3,170gpm
Head	7m / 23ft
HP/kW	60-85 HP / 44-62kW
R.P.M	980-1,180
Solid Handling	90mm / 3.5inch
Weight	1,000kg / 2,205Lbs

Main features :

All Pumps have standard high efficiency agitator to lift settled solids.
High abrasion resistance with high chrome wear parts.
Low rotation speed to reduce wear effect.



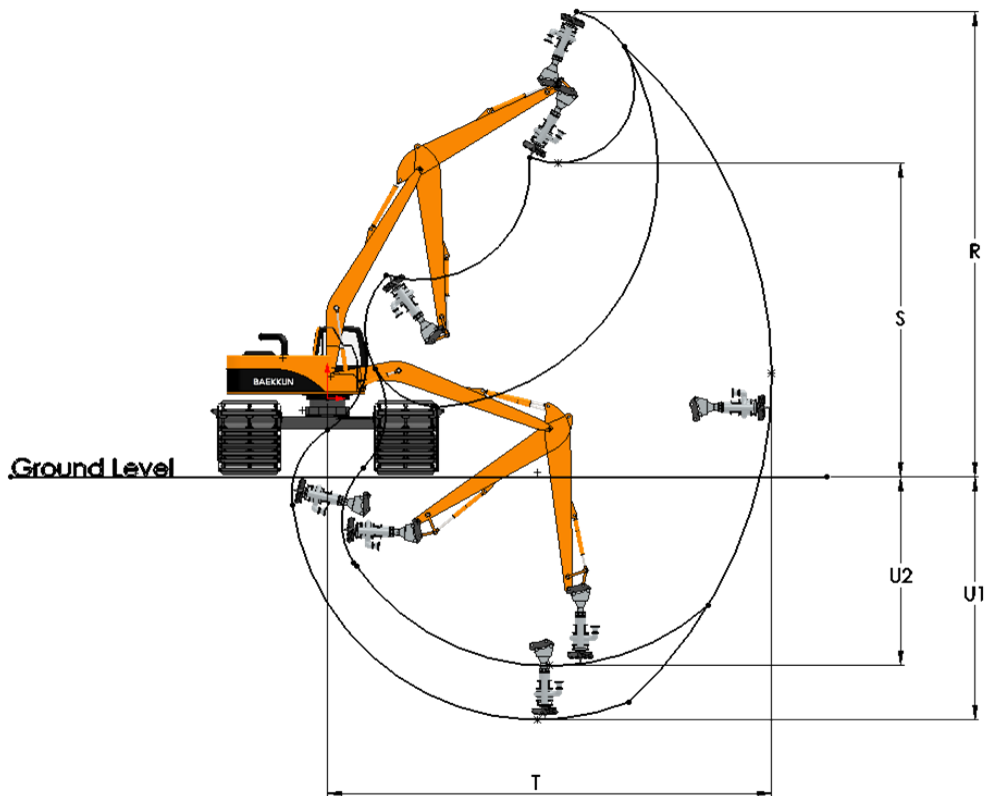
HYDRAULIC CUTTER PUMP SPECIFICATION



HYDRAULIC CUTTER PUMP SPECIFICATION

Cutter Suction Pumps - PRODUCTION ESTIMATION CHART														
Hydraulic Pumps	Delivery		Capacity		Head (M-H ₂ O)		Power		R.P.M		Solid Handling		Weight	
	mm	inch	[m ³ /hr]	gpm	m	ft	min [HP/kW]	max [HP/kW]	min	max	mm	inch	kg	Lbs
BKCP 24	100	4	80	352	28	92	14/10	26/19	1,450	1,750	25	1.0	200	440
BKCP 35A	100	4	120	528	28	92	25/18	35/25	980	1,180	35	1.4	500	1,100
BKCP 35B	150	6	170	749	20	66	25/18	35/25	980	1,180	35	1.4	510	1,125
BKCP 50A	100	4	110	484	42	138	35/25	50/37	980	1,180	35	1.4	600	1,325
BKCP 50B	150	6	170	749	32	105	35/25	50/37	980	1,180	35	1.4	610	1,345
BKCP 50HC	150	6	250	1,101	21	69	35/25	50/37	980	1,180	60	2.4	700	1,545
BKCP 50/108A	100	4	140	616	65	213	60/44	85/62	1,180	1,450	35	1.4	600	1,325
BKCP 50/108B	150	6	210	925	58	190	60/44	85/62	1,180	1,450	35	1.4	620	1,365
BKCP 85A	150	6	240	1,057	30	98	60/44	85/62	980	1,180	60	2.4	700	1,545
BKCP 85B	200	8	350	1,541	23	75	60/44	85/62	980	1,180	60	2.4	730	1,610
BKCP 85HC	250	10	720	3,170	7	23	60/44	85/62	980	1,180	90	3.5	1,000	2,205
BKCP 85/160A	200	8	370	1,629	50	164	120/88	156/115	1,180	1,450	60	2.4	820	1,810
BKCP 85/160B	250	10	500	2,200	36	118	120/88	156/115	1,180	1,450	60	2.4	840	1,850
BKCP 85/160HC	250/300	10/12	900	3,963	23	75	120/88	156/115	1,180	1,450	90	3.2	1,100	2,425
BKCP 300A	250	10	900	3,963	34	112	150/110	292/214	600	750	120	4.7	3,500	7,715
BKCP 300B	300	12	1,200	5,284	28	92	150/110	292/214	600	750	120	4.7	3,550	7,825
BKCP 400A	300	12	1,000	4,403	42	138	320/239	400/295	750	850	120	4.7	3,550	7,825
BKCP 400B	350	14	1,200	5,284	34	112	320/239	400/295	750	850	120	4.7	3,600	7,935
BKCP 400C	400	16	1,350	5,944	32	105	320/239	400/295	750	850	120	4.7	3,600	7,935

DIMENSIONS & WORKING RANGE



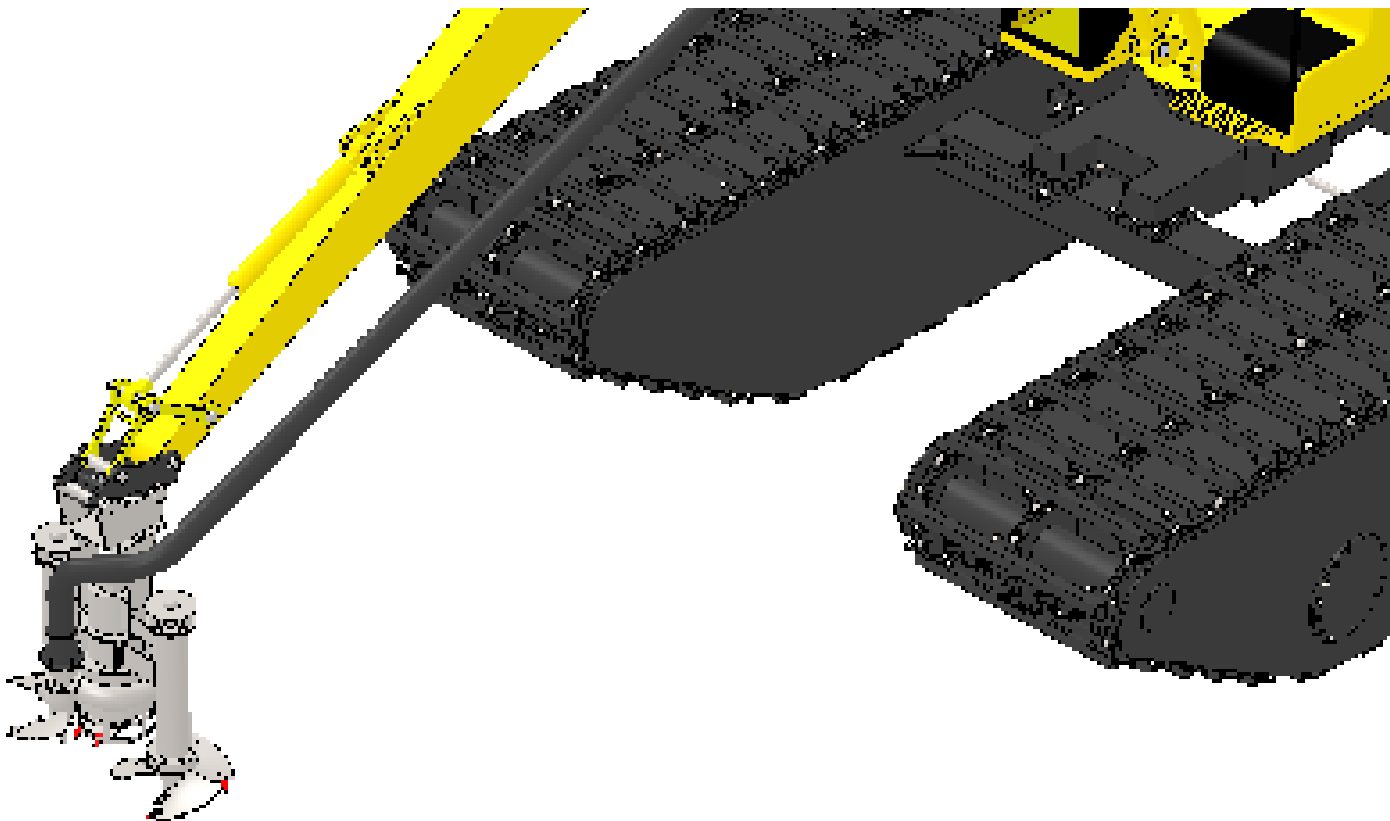
DIMENSIONS & WORKING RANGE

• With STD Front

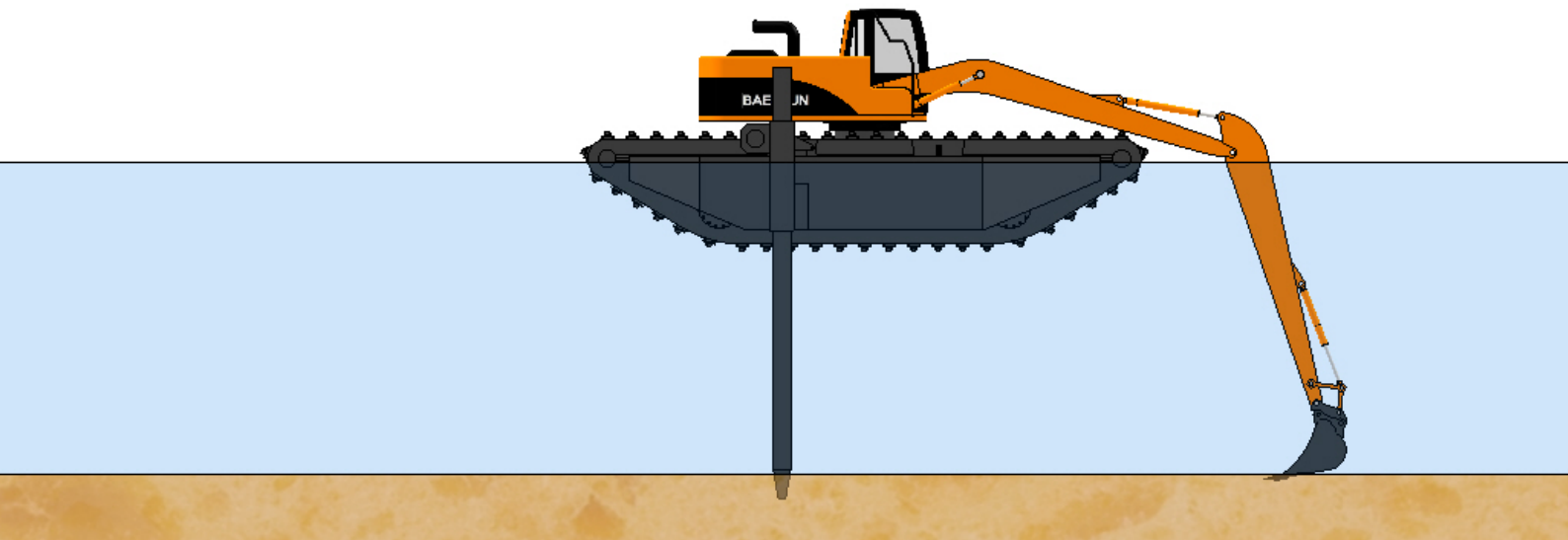
Dimensions	Description	unit	Baekkun Amphibious Models					
			BKEX80R	BKEX140	BKEX225	BKEX260	BKEX300	BKEX340
R	Max. Cutting Height	mm	9,085	10,720	11,825	11,795	12,180	12,535
S	Max. Loading Height	mm	4,685	6,320	7,425	7,395	7,780	8,135
T	Recommended Outreach	mm	8,245	9,350	10,805	11,085	11,510	12,110
U1	Max. Digging Depth (on Front)	mm	5,040	6,245	6,945	7,085	7,600	7,815
U2	Max. Digging Depth (on Side)	mm	4,340	4,695	5,020	4,930	5,455	5,805

• With SLR Front

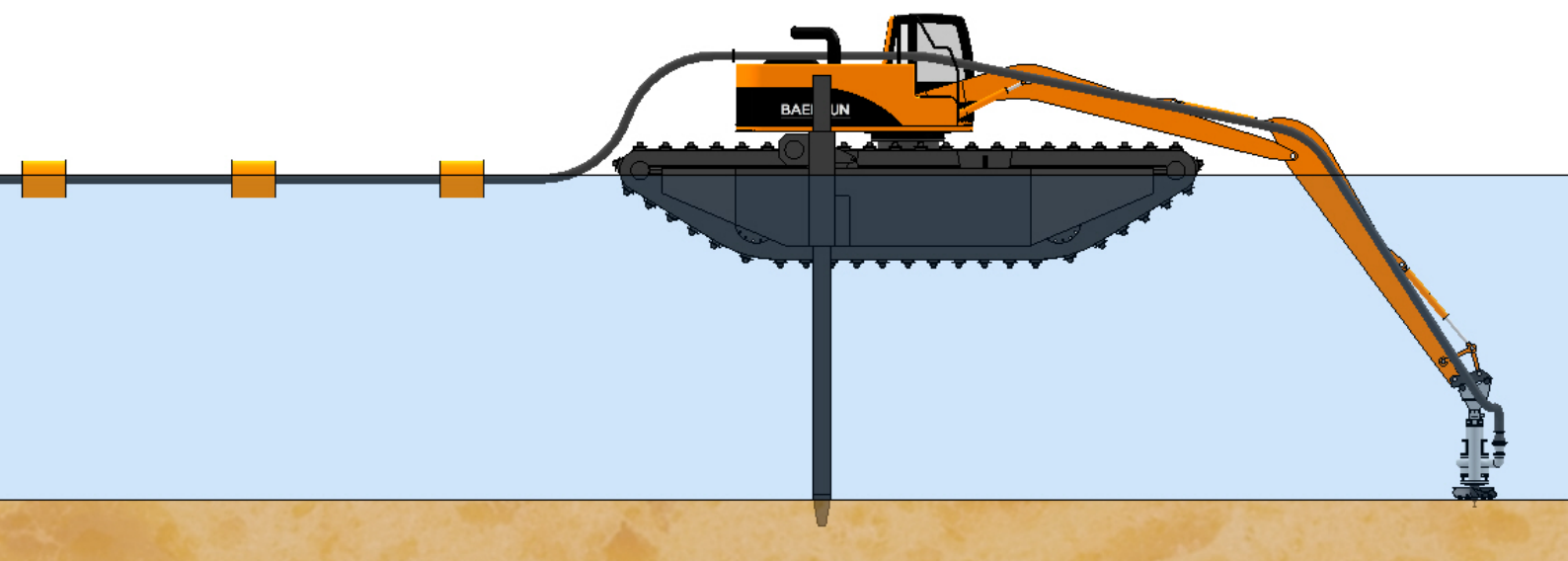
Dimensions	Description	unit	Baekkun Amphibious Models	
			BKEX140	BKEX225
R	Max. Cutting Height	mm	14,200	15,950
S	Max. Loading Height	mm	9,800	11,550
T	Recommended Outreach	mm	13,700	15,450
U1	Max. Digging Depth (on Front)	mm	9,200	9,950
U2	Max. Digging Depth (on Side)	mm	8,650	8,650



DREDGING ON THE WATER



Put the Spud in ground and Dredge with Bucket



Put the Spud in ground and Dredge with Cutter Pump



We treasure the value of the Environment and Future

Baekkun Dredging co., Ltd



