EN

Juntttan

respecting ground

TRUSTED PARTNER ON HIGH DEMANDS

Junttan has worked together with construction professionals for over 40 years and has experience in developing and manufacturing the industry's leading piling equipment. By helping our customers to make the most of their pile driving investment, we help them to do their job in the best possible way, no matter where in the world their next site may be.

Paying close attention to the evolving needs of the construction industry, as well as sustainable development, we provide the deepest foundations, with as light a footprint on the environment as possible.

HYDRAULIC IMPACT HAMMERS & POWERPACKS

By gaining a comprehensive understanding to achieve the evolving, ambitious goals of modern construction business, we have tested and developed our impact hammers to provide the best possible performance under all conditions. Our versatile selection of equipment ensures that for every construction challenge, the ideal solution can be found.

Want to get more out of your hammer? The Junttan power packs are ready for use quickly, and the low noise level further enhances their user-friendliness. They are compact yet powerful pieces of equipment that can conveniently be transported from one construction site to another.

TAKING CARE

Even the most durable, reliable and tough hammer wears down if it is not properly taken care of – or used in a wrong way or task. That's where our comprehensive customer care steps in. Not only do we maintain and service your precious piling equipment for increased lifetime and performance, we also train your personnel to use it in the right way. This way, you will always make the most of your Junttan machinery, and get the best return for your investment in the world's most advanced piling technology.

#PileSmarter

PILE SMARTER

Utilizing industry-leading technology and know-how, the Junttan hydraulic impact hammers will perform the best possible way at every construction site. With Junttan intelligent solutions – not only optimized energy and high productivity is gained but also less noise, vibration and emissions is created than with conventional hammers.

HIGH VERSATILITY
Wide variety of piling solutions whether projects take place on land or offshore, or whatever piling type materials is required.

MORE POWER
Providing most efficient performance and power control combined with optimized energy transfer to the pile.

CUSTOMIZED SOLUTIONS
Providing full concept - from driveablity analyses, optimized equipment, operational support and service, to quality and bearing verification.

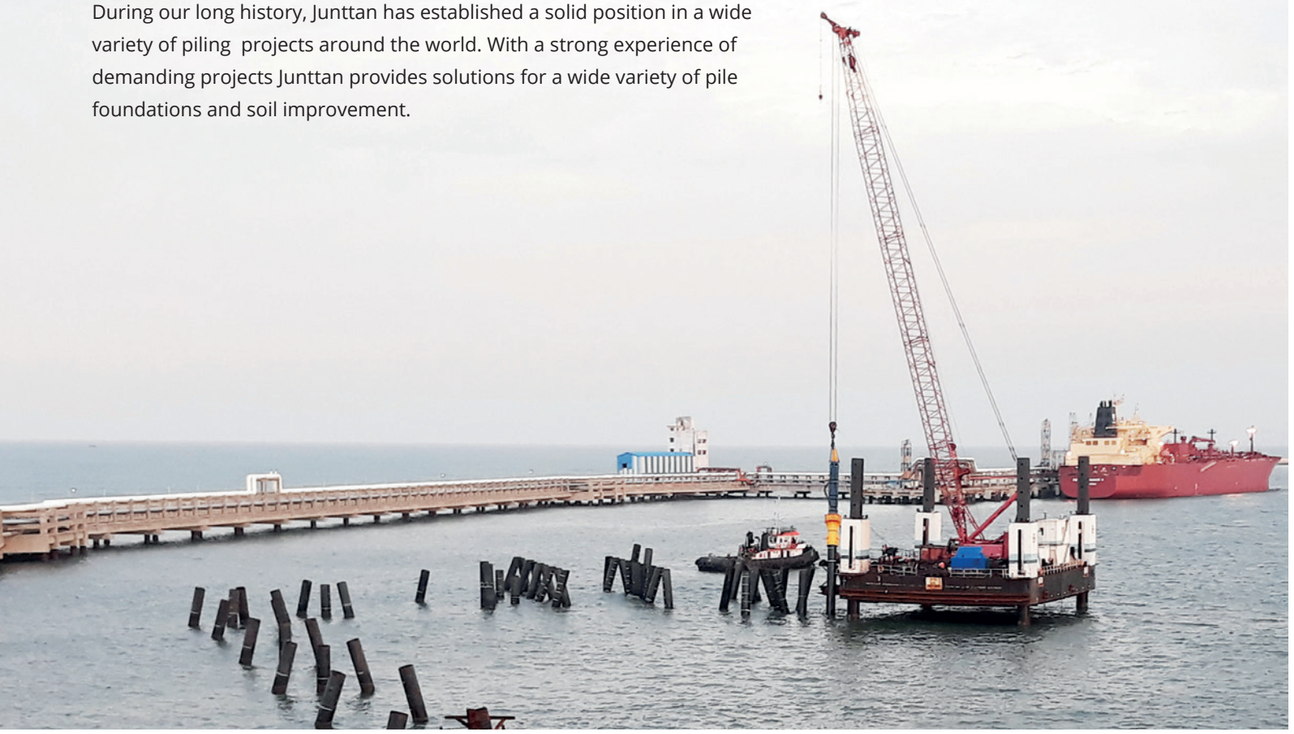
NOISE REDUCTION
Control the noise pollution to minimize the impact on the environment by Junttan customized noise reduction solutions.

JUNTTAN INTELLIGENCE
Exact online data to support your piling process, remote access where ever your project is located, automated functions to ensure a safe and efficient operation.

ENVIRONMENTAL FOCUS
All Junttan hammers are manufactured with a keen eye on sustainable development. As a result, they create less noise and vibration and fewer emissions than conventional hammers.

SOLUTIONS TO MATCH YOUR PROJECTS

During our long history, Junttan has established a solid position in a wide variety of piling projects around the world. With a strong experience of demanding projects Junttan provides solutions for a wide variety of pile foundations and soil improvement.



MARINE WORKS – HARBORS

Wide range of ideal options for harbor and marine works and development projects fulfilling environmental requirements.

ENERGY

Increasing need of energy generates high demand for foundation equipment with a variety of tools and options e.g. LNG terminals for the oil/gas industry, wind and solar farms.

BRIDGES

Building bridges requires very precise work positioning with high performance and customized tools – especially for raked piles.

RETAINING WALLS

Tools and options for retaining walls such as combi-walls, sheet piles, and king piles.

CIVIL & INFRASTRUCTURE

Most efficient and proven solutions for steel, timber and pre-cast pile foundations. Increase your productivity with purpose build piling rigs and integrated hydraulic impact hammers.

DYNAMIC COMPACTION

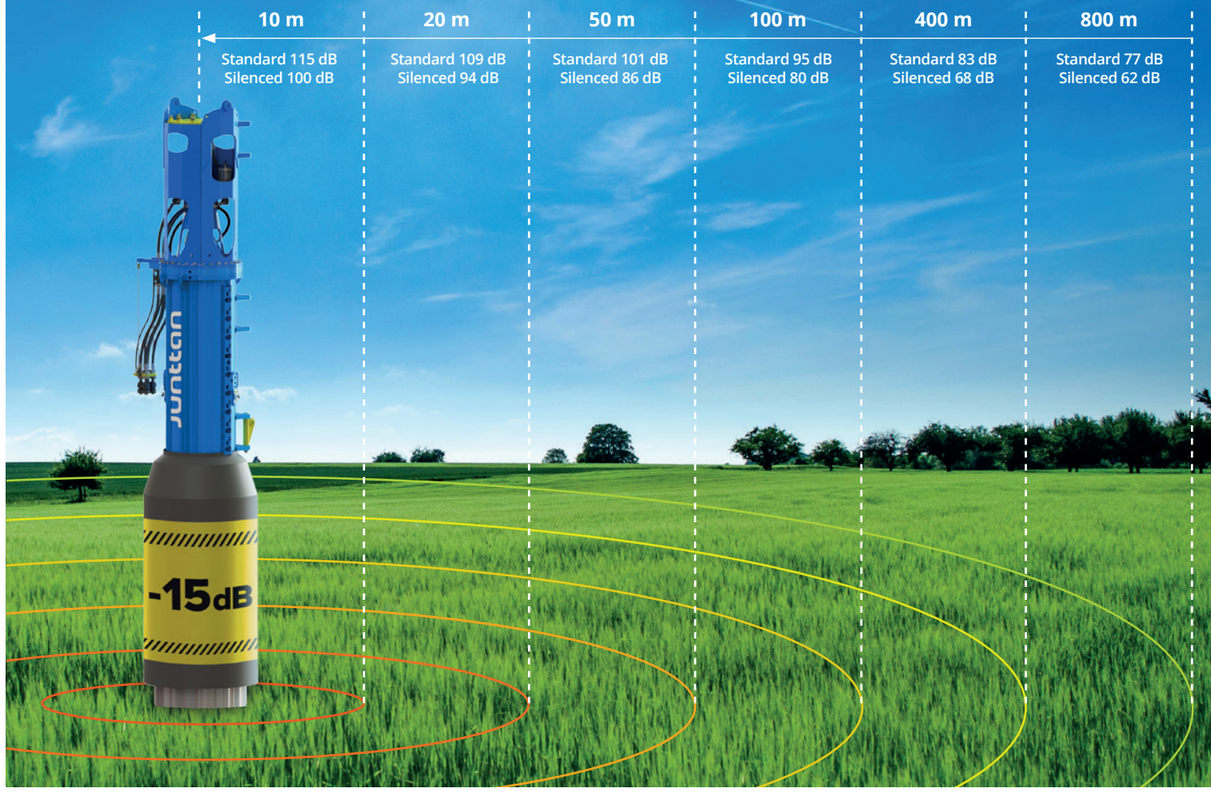
Excavator integrated hydraulic hammer solution is fast and efficient method for soil improvement projects.

POWER CONTROL

Junttan accurate and adjustable energy control ensures pile integrity to reach requested and designed result safely and efficiently. A smooth installation process helps ensure that everything takes place with as little impact on the environment as possible. User friendly and easy operational control system enables to complete projects in time with intelligent solutions to monitor and record the piling information.

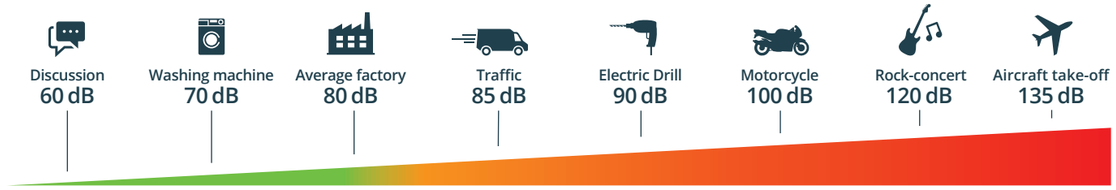
NOISE CONTROL

As a result of continuous development for a safer and more efficient solution to noise reduction demands, Junttan has improved structural solutions and accessories to significantly reduce noise pollution. For different types of applications, we can provide noise control solutions including special drive caps, guide tubes and insulation jackets.



System factors affecting noise are e.g. pile length, pile diameter, pile material and it's thickness, soil composition, hammer and pile aligning, ramblock mass and ram block drop height.

NOISE COMPARISON (dB)



SUPERIOR BLOW RATE

OPTIMIZED STRUCTURE TO ENSURE PRODUCTIVITY & DURABILITY

AUTOMATED FUNCTIONS FOR EASY, SAFE & EFFICIENT OPERATION

- Dial-up mode (energy or drop height)
- Pile cruise (minimum fuel consumption)
- Hammer pilot
- PDA mode
- Peak energy mode

ESPECIALLY DESIGNED FOR STEEL PILES

HHX – NEW GENERATION HYDRAULIC HAMMERS

DESIGNED FOR STEEL

Junttan HHx series, the new generation hydraulic hammers for tough conditions provides an adjustable stroke with blow rates up to 60 blows per minute with max energy. The new level of total efficiency of the HHx hammer combined with intelligent x-series solutions leads to a high level of piling project productivity, reliability and user-friendliness, as well as easy on-site service. The robust, totally new structural design of the HHx series hammers ensure that the hammer can be operated with full capacity at all times in the toughest conditions.

The Junttan HHx hammers are ideal solution for driving steel piles. The hammers are operated with the new generation Junttan xCU power packs which fulfil the latest environmental requirements and can be supplied with Tier 3, Tier 4 and Tier 5 final engines.

HHK-SERIES WITH SUPERIOR PERFORMANCE

IMPACT HAMMER FOR ALL PILE TYPES

HHK impact hammers are suitable for driving all types of piles: precast concrete, steel tube, sheet, and timber piles. The design of the hammer frame and drive cap makes for low impact noise and less vibration while piling. All impact energy is concentrated in the center of the pile. The construction of the hammer makes it possible to use biodegradable hydraulic oils. The hammer is easy to connect to different hydraulic systems and can be operated either by the hydraulic system of the rig or by a separate power pack. Furthermore, it can be mounted on all kinds of leaders or be freely suspended.

- VERSATILITY
- PROVEN RELIABILITY
- FLEXIBILITY
- MINIMUM DOWNTIME
- ECONOMICAL AND SAFE
- LOW LIFE TIME COSTS

STRUCTURE AND OPERATING PRINCIPLE

Junttan's solution is ingeniously functional. Our close co-operation with piling contractors is evident through the functionality of our equipment and well-planned details. Being environmentally friendly is rarely associated with heavy construction, but we take it as a priority. Low noise about big innovation. The innovative drive cap design allows superb efficiency and low impact noise. All impact energy is concentrated to the center of the pile, allowing a measured efficiency ratio of more than 95% to be achieved.

HIGHLIGHTS

1. **RUGGED AND RELIABLE**. Robust and simple frame design is the basis for a long working lifetime. Reduced vibration and noise levels are achieved through an innovative frame design. Optimized frame weight and balance guarantee high performance of the hammer.

2. **HANG IT AS YOU WISH**. Junttan hammers can also be crane suspended. Different accessories make crane suspension an easy process.

3. **OPERATION IN FULL CONTROL**. The ingenious hydraulic and electrical system design allows the impact energy, blow rate and frequency to be easily adjusted according to soil conditions and pile type.

4. **STRONG BUT GENTLE**. Accurate strokes and balanced hammer block acceleration prevent pile head damage and guarantee a long working lifetime of the hammer.

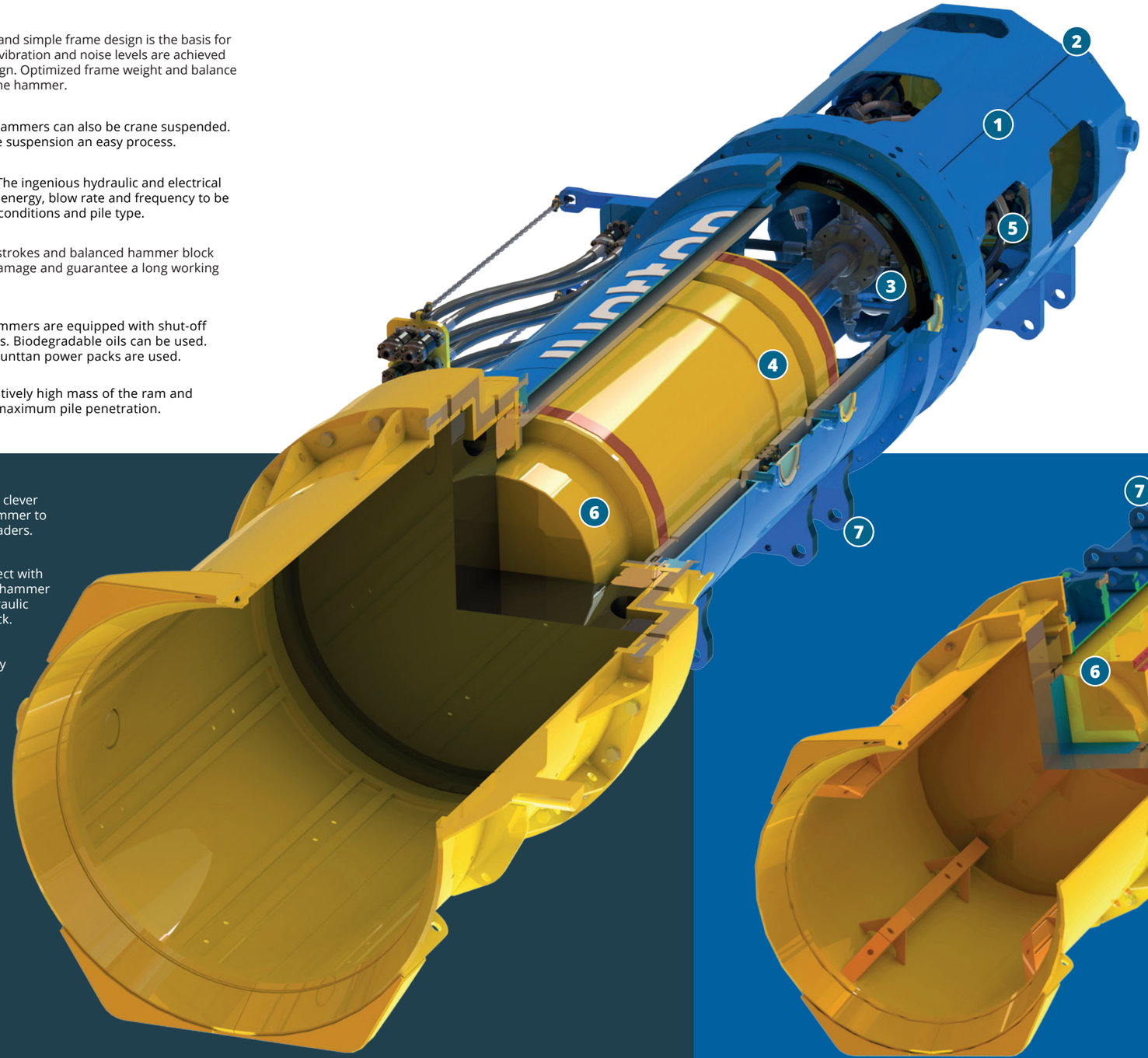
5. **BLUE HAMMERS ARE GREEN**. Hammers are equipped with shut-off valves which prevent oil leakages. Biodegradable oils can be used. All exhaust gas is filtered when Junttan power packs are used.

6. **PENETRATION COUNTS**. The relatively high mass of the ram and optimal impact velocity ensure maximum pile penetration.

7. **NOT TIED TO ONE PARTNER**. The clever mounting system enables the hammer to be used with different kinds of leaders.

8. **HIGH VERSATILITY.** Easy to connect with different hydraulic systems. The hammer can be operated by the rig's hydraulic system or by separate power pack.

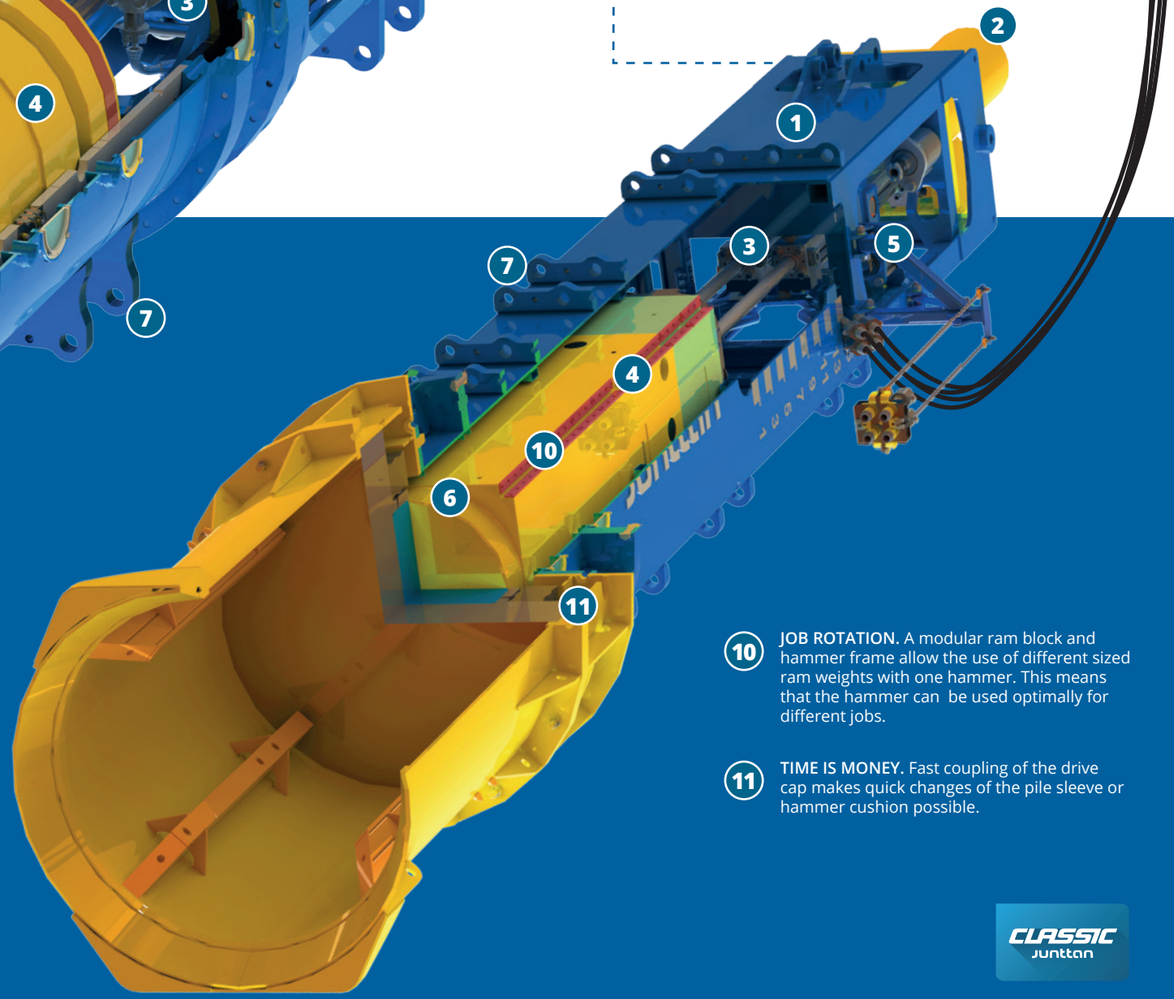
9. **HAMMER CONTROL.** User-friendly control unit to monitor and operate piling proces.



X-SERIES Junttan

9 Control Unit

8 Power pack



10. **JOB ROTATION.** A modular ram block and hammer frame allow the use of different sized ram weights with one hammer. This means that the hammer can be used optimally for different jobs.

11. **TIME IS MONEY.** Fast coupling of the drive cap makes quick changes of the pile sleeve or hammer cushion possible.

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TECHNICAL FEATURES

X-SERIES Junttan

MODEL	HHx160	HHx190	HHx210	HHx250	HHx300
RAM WEIGHT	10 000 kg (22 000 lb)	12 000 kg (26 400 lb)	14 000 kg (30 800 lb)	16 000 kg (35 200 lb)	20 000 kg (44 000 lb)
MAXIMUM ENERGY	160 kNm (117 920 ft-lb)	190 kNm (140 030 ft-lb)	210 kNm (154 770 ft-lb)	250 kNm (184 250 ft-lb)	300 kNm (221 100 ft-lb)
DROP HEIGHT MAX	1 000 mm (3.28ft)	1 000 mm (3.28ft)	1 000 mm (3.28ft)	1 000 mm (3.28ft)	1 000 mm (3.28ft)
BLOWS PER MINUTE	60-120	50-120	45/60-120	60-120	50-120
PRESSURE	161 bar (2 901 psi)	193 bar (3 263 psi)	225 bar (3 626 psi)	200 bar (2 901 psi)	250 bar (3 626 psi)
OIL FLOW (nominal / max)	575 l/min (152 gpm)	575 l/min (152 gpm)	575 l/min (152 gpm)	785 l/min (207 gpm)	785 l/min (207 gpm)
STANDARD DRIVE CAP	Ø 1 280 / 1 220 mm (50 / 48 in)	Ø 1 280 / 1 220 mm (50 / 48 in)	Ø 1 280 / 1 220 mm (50 / 48 in)	Ø 1 720 / 1 625 mm (68 / 64 in)	Ø 1 720 / 1 625 mm (68 / 64 in)
DRIVE CAPS	On request	On request	On request	Ø 2 290 mm (Ø 90 in)	Ø 2 290 mm (Ø 90 in)
EXTENSIONS	No extensions	No extensions	No extensions	No extensions	No extensions
HAMMER LENGTH	6 823 mm (269 in)	7 278 mm (287 in)	7 733 mm (304 in)	8 642 mm (340 in)	9 097 mm (358 in)
HAMMER WEIGHT	24 326 kg (53 517 lb)	27 690 kg (60 918 lb)	30 285 kg (66 407 lb)	33 600 kg (74 000 lb)	38 700 kg (85 300 lb)

MODEL	SHK3	SHK5	SHK7	SHK9
RAM WEIGHT	3 000 kg (6 614 lb)	5 000 kg (11 000 lb)	7 000 kg (15 400 lb)	9 000 kg (19 800 lb)
MAXIMUM ENERGY	36 kNm (29 607 ft-lb)	61 kNm (44 845 ft-lb)	89 kNm (65 621 ft-lb)	119 kNm (87 740 ft-lb)
DROP HEIGHT MAX	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)
BLOWS PER MINUTE	50–140+	50–140+	50–140+	50–140+
PRESSURE	134 bar (1 945 psi)	134 bar (1 945 psi)	211 bar (3 060 psi)	271 bar (3 931 psi)
OIL FLOW (nominal / max)	231/294 l/min (61/66 gpm)	231/294 l/min (61/66 gpm)	299/431 l/min (70/87 gpm)	299/431 l/min (70/87 gpm)
DRIVE CAPS	470 x 470 mm Ø 770 mm	470 x 470 mm Ø 770 mm	550 x 550 mm Ø 850 mm	550 x 550 mm Ø 850 mm
	18 x 18 in Ø 30 in	18 x 18 in Ø 30 in	21 x 21 in 33 in	21 x 21 in Ø 33 in
EXTENSIONS	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4400 lb)	1 / 2t (2 200 / 4 400 lb)
HAMMER LENGTH	5 432 mm (214 in)	6 172 mm (243 in)	6 935 mm (273 in)	7 675 mm (302 in)
HAMMER WEIGHT	6 920 kg (15 256 lb)	9 250 kg (20 393 lb)	11 730 kg (25 860 lb)	14 800 kg (32 560 lb)

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MODEL	HHK3A	HHK5A	HHK7A	HHK9A
RAM WEIGHT	3 000 kg (6 614 lb)	5 000 kg (11 000 lb)	7 000 kg (15 400 lb)	9 000 kg (19 800 lb)
MAXIMUM ENERGY	35 kNm (26 070 ft-lb)	59 kNm (43 398 ft-lb)	82 kNm (60 757 ft-lb)	106 kNm (78 116 lb)
DROP HEIGHT MAX	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)
BLOWS PER MINUTE	40–100	40–100	40–100	40–100
PRESSURE	106 bar (1 537 psi)	176 bar (2 552 psi)	183 bar (2 654 psi)	235 bar (3 408 psi)
OIL FLOW (nominal / max)	231/304 l/min (61/80 gpm)	231/304 l/min (61/80 gpm)	293/398 l/min (77/105 gpm)	293/398 l/min (77/105 gpm)
DRIVE CAPS	470 x 470 mm Ø 770 mm	470 x 470 mm Ø 770 mm	550 x 550 mm Ø 850 mm	550 x 550 mm Ø 850 mm
	18 x 18 in Ø 30 in	18 x 18 in Ø 30 in	21 x 21 in Ø 33 in	21 x 21 in Ø 33 in
EXTENSIONS	1 / 2t (2 200 / 4 400 lb)	1t (2 200 lb)	1 / 2t (2 200 / 4 400 lb)	–
HAMMER LENGTH	5 160 mm (203 in)	5 900 mm (232 in)	6 640 mm (264 in)	7 380 mm (291 in)
HAMMER WEIGHT	6 000 kg (13 228 lb)	8 400 kg (18 519 lb)	11 000 kg (24 251 lb)	13 500 kg (29 762 lb)

MODEL	HHK10A	HHK12A	HHK14A	HHK16A
RAM WEIGHT	10 000 kg (22 000 lb)	12 000 kg (26 400 lb)	14 000 kg (30 800 lb)	16 000 kg (35 200 lb)
MAXIMUM ENERGY	118 kNm (87 032 ft-lb)	141 kNm (104 155 ft-lb)	165 kNm (121 515 ft-lb)	188 kNm (138 874 ft-lb)
DROP HEIGHT MAX	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)	1 200 mm (3.94 ft)
BLOWS PER MINUTE	40–100	40–100	40–100	40–100
PRESSURE	176 bar (1 537 psi)	157 bar (2 277 psi)	183 bar (2 654 psi)	209 bar (3 031 psi)
OIL FLOW (nominal / max)	462/609 l/min (122/160 gpm)	586/795 l/min (155/210 gpm)	586/795 l/min (155/210 gpm)	586/795 l/min (155/210 gpm)
STANDARD DRIVE CAP (diameter / max. pile)	Ø 1 080 / 1 016 mm (43/40 in)	Ø 1 080 / 1 016 mm (43/40 in)	Ø 1 080 / 1 016 mm (43/40 in)	Ø 1 080 / 1 016 mm (43/40 in)
DRIVE CAPS	–	–	–	–
EXTENSIONS	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	–
HAMMER LENGTH	6 480 mm (275 in)	6 980 mm (275 in)	7 480 mm (295 in)	7 980 mm (314 in)
HAMMER WEIGHT	19 650 kg (43 321 lb)	21 900 kg (48 281 lb)	24 200 kg (53 352 lb)	26 400 kg (58 202 lb)

MODEL	HHK3S	HHK4S	HHK5S	HHK7S	HHK9S
RAM WEIGHT	3 000 kg (6 614 lb)	4 000 kg (8 818 lb)	5 000 kg (11 000 lb)	7 000 kg (15 400 lb)	9 000 kg (19 800 lb)
MAXIMUM ENERGY	44 kNm (32 450 ft-lb)	59 kNm (43 500 ft-lb)	74 kNm (54 266 ft-lb)	103 kNm (75 971 ft-lb)	132 kNm (97 679 ft-lb)
DROP HEIGHT MAX	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)
BLOWS PER MINUTE	30–100	30–100	30–100	30–100	30–100
PRESSURE	134 bar (1 945 psi)	178 bar (2 582 psi)	150 bar (2 176 psi)	211 bar (3 060 psi)	271 bar (3 931 psi)
OIL FLOW (nominal / max)	188/227 l/min (50/60 gpm)	188/227 l/min (50/60 gpm)	264/328 l/min (70/87 gpm)	264/328 l/min (70/ 87 gpm)	264/328 l/min (70/87 gpm)
DRIVE CAPS	470 x 470 mm Ø 770 mm	470 x 470 mm Ø 770 mm	550 x 550 mm Ø 850 mm	550 x 550 mm Ø 850 mm	550 x 550 mm Ø 850 mm
	Concrete: □ 18 x 18 in Steel: Ø 30 in	Concrete: □ 18 x 18 in Steel: Ø 30 in	Concrete: □ 21 x 21 in Steel: Ø 33 in	Concrete: □ 21 x 21 in Steel: Ø 33 in	Concrete: □ 21 x 21 in Steel: Ø 33 in
EXTENSIONS	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)	1 / 2t (2 200 / 4 400 lb)
HAMMER LENGTH	5 900 mm (232 in)	6 270 mm (247 in)	6 640 mm (261 in)	7 380 mm (291 in)	8 120 mm (320 in)
HAMMER WEIGHT	6 360 kg (14 021 lb)	7 550 kg (16 645 lb)	9 050 kg (19 952 lb)	11 900 kg (26 235 lb)	14 100 kg (31 085 kg)

MODEL	HHK10S	HHK12S	HHK16S	HHK20S	HHK25S
RAM WEIGHT	10 000 kg (22 000 lb)	12 000 kg (26 400 lb)	16 000 kg (35 200 lb)	20 000 kg (44 000 lb)	25 000 kg (55 000 lb)
MAXIMUM ENERGY	118 kNm (87 032 ft-lb)	177 kNm (130 914 ft-lb)	235 kNm (173 592 ft-lb)	294 kNm (216 990 ft-lb)	368 kNm (271 238 ft-lb)
DROP HEIGHT MAX	1 200 mm (3.94 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)	1 500 mm (4.92 ft)
BLOWS PER MINUTE	40–100	30–100	30–100	30–100	30–100
PRESSURE	176 bar (1 537 psi)	181 bar (2 625 psi)	241 bar (3 495 psi)	301 bar (4 366 psi)	244 bar (3 539 psi)
OIL FLOW (nominal / max)	462/609 l/min (122/160 gpm)	528/657 l/min (139/174 gpm)	528/657 l/min (139/174 gpm)	528/657 l/min (139/174 gpm)	831/999 l/min (220/264 gpm)
STANDARD DRIVE CAP	Ø 1 080 / 1 016 mm (43/40 in)	Ø 1 280 / 1 220 mm (50 / 48 in)	Ø 1 370 / 1 320 mm (54 / 52 in)	Ø 1 720 / 1 625 mm (68 / 64 in)	Ø 1 720 / 1 625 mm (68 / 64 in)
DRIVE CAPS	–	Ø 1 080 mm (43 in)	Ø 1 720 mm (68 in), Ø 2 290 mm (90 in)	Ø 1 370 mm (54 in), Ø 2 290 mm (90 in)	Ø 2 120 mm (83 in), Ø 2 290 mm (90 in)
EXTENSIONS	1 / 2t (2 200 / 4 400 lb)	2t (4 400 lb)	2 / 4t (4 400 / 8 800 lb)	–	3t (6 600 lb)
HAMMER LENGTH	6 480 mm (275 in)	7 895 mm (311 in)	7 440 mm (293 in)	8 240 mm (324 in)	8 838 mm (348 in)
HAMMER WEIGHT	19 650 kg (43 321 lb)	19 400 kg (42 770 lb)	29 690 kg (65 468 lb)	34 856 kg (76 844 lb)	46 800 kg (103 176 lb)

TECHNICAL FEATURES

X-SERIES Junttan

MODEL	10xCU	15xCU	20xCU
ENGINE TYPE (CUMMINS)	QSC 8.3 TIER 3 / STAGE IIIA QSL 9 Tier 4F / Stage IV	QSL 9 Tier 4F / Stage IV	QSX15 Tier 3 / Stage IIIA QSX15 Tier 4F / Stage IV
ENGINE RATED POWER	227 kW (304 hp) / 283 kW (384 hp)	283 kW (384 hp)	496 kW (665 hp) / 503 kW (675 hp)
MAX OPERATING PRESSURE	350 bar (5 076 PSI)	350 bar (5 076 PSI)	350 bar (5 076 PSI)
HYDRAULIC OIL TANK	1 000 l (263 gal)	1 000 l (263 gal)	1 500 l (396 gal)
FUEL TANK	660 l (173 gal)	660 l (173 gal)	660 l (173 gal)
OIL FLOW MAX	380 l/min (100 gpm)	2 x 380 l/min (2 x 100 gpm)	2 x 520 l/min (2 x 137 gpm)
CONTROL SYSTEM	X-control / pile cruise	X-control / pile cruise	X-control / pile cruise
WEIGHT	5 500 kg (12 120 lb)	5 900 kg (12 980 lb)	8 700 kg (19 140 lbs)

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MODEL	10CCU	15CCU	20CCU	30CCU
ENGINE TYPE (CUMMINS)	QSC 8.3 Tier 3 / Stage IIIA	QSM11 Tier 3 / Stage IIIA	QSX15 Tier 3 / Stage IIIA	QSK23 Tier 1
ENGINE RATED POWER	227 kW (304 hp)	280 kW (375 hp)	388 kW (520 hp)	708 kW (950 hp)
MAX OPERATING PRESSURE	220 bar (3 190 PSI)	350 bar (5 076 PSI)	350 bar (5 076 PSI)	350 bar (5 076 PSI)
HYDRAULIC OIL TANK	1 000 l (264 gal)	1 850 l (488 gal)	1 850 l (488 gal)	2 700 l (713 gal)
FUEL TANK	400 l (105 gal)	760 l (210 gal)	760 l (210 gal)	2 500 l (660 gal)
OIL FLOW MAX	380 l/min (100 gpm)	2 x 380 l/min (2 x 100 gpm)	2 x 380 l/min (2 x 100 gpm)	2 x 546 l/min (2 x 144 gpm)
CONTROL SYSTEM	classic	classic	classic	classic
WEIGHT	5 700 kg (12 570 lb)	8 400 kg (18 480 lb)	8 700 kg (19 140 lb)	13 500 kg (29 700 lb)

POWER PACKS – A FOCUSED EFFORT FOR THE BEST RESULTS

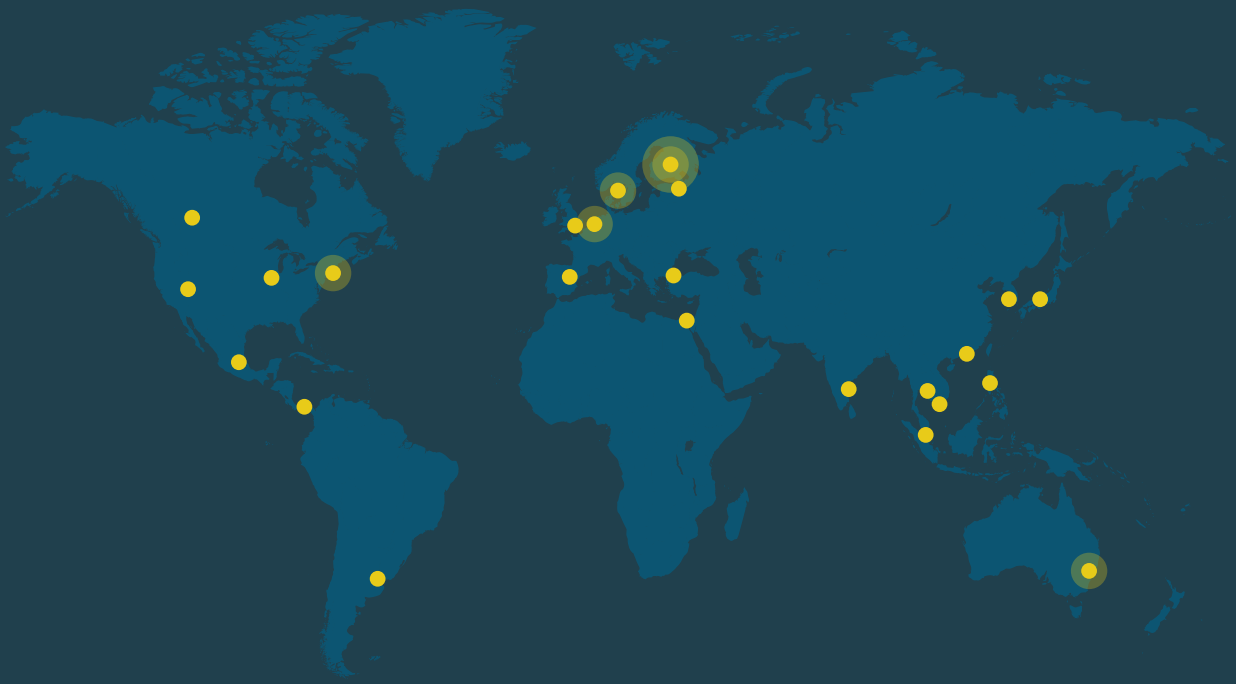
The Junttan power pack allows you to get the most out of your hammer. By efficiently combining sheer power with an ability to perform, power packs are able to ensure the most effective, reliable and flawless flow throughout the piling process. Thanks to their easy handling, excellent durability and top-notch fuel economy, Junttan power packs enable optimal functionality even in the most demanding conditions.

The Junttan power pack is ready for use quickly, and the low noise level further enhances its user-friendliness. It is a compact, yet powerful piece of equipment that can conveniently be transported from one construction site to another.

Junttan 10XCU power packs utilize the latest control technology, developed by Junttan, for sophisticated management of the piling process. Automatic oil flow control, together with the latest in engine technology ensure a highly economical and ecological operation.

At your service

Combining state-of-the-art piling machinery with uncontested customer service and sheer determination to do everything in our power to help customers succeed, Junttan can improve all of your operational efficiency.



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