

WE MADE EXTRAORDINARY

P O W E R



KARINCA 206

SURGICAL MOTOR SYSTEMS

Battery Operated

P.D. 2 . Jėgos instrumentai stambiųjų kaulų
chirurginėms operacijoms

AYGUN[®]
SURGICAL INSTRUMENTS CO., INC.

" Meeting point for surgery..."

EDITON 01

BATTERY CHARGING UNITS



p.d.2.1.8. Instrumentas maitinamas įkraunamais ličio akumuliatoriais

- ✓ **M206-410**
Power box with battery pack
- Powerful brushless DC motor technology
- Battery capacity: 2.5 Ah / 37 Wh
- Voltage: 14.8 Volts
- Integrated OLED screen and audible alert notification
- Not autoclavable
- 75 x 61 x 160 mm / 540 g



p.d.2.1.9. Baterijos pakeitimas - nuspaudžiant užraktą baterijos dangtelio



- M206-226**
Charger unit for 1 battery
- Main voltage 100-240 Volts, 50-60 Hz
- Charging current 2 A
- Charging voltage 16.8 Volts
- Protections: Short circuit / Overload / Over voltage
- Charging indicator led
- Battery not included
- 130 x 250 x 130 mm / 1300 g



- M206-212**
Autoclavable sterile funnel for aseptic battery loading
- Steam sterilisable
- 30 x 74 x 104 mm / 55 g



Sterile funnel

P.D.2.4 Pakrovėjas akumuliatoriams



- ✓ **M206-227**
Charger unit for 2 batteries
- Main voltage 100-240 Volts, 50-60 Hz ✓
- Charging current 2 A (x2) ✓
- Charging voltage 16.8 Volts ✓
- Protections: Short circuit / Overload / Over voltage ✓
- Charging indicator led ✓ **krovimo indikatorius**
- Battery not included
- 230 x 250 x 130 mm / 2150 g

2.4.2. dvivietis, vienu metu gali krauti 2 akumuliatorius



- ✓ **M206-411**
Battery pack, spare part (for service needs only)
- Li-ion battery
- Battery capacity: 2.5 Ah / 37 Wh
- Voltage: 14.8 Volts
- Not autoclavable
- 68 x 56 x 35 mm / 240 g

p.d.2.1.8. Instrumentas maitinamas įkraunamais ličio akumuliatoriais



- M206-229**
Charger unit for 4 batteries
- Main voltage 100-240 Volts, 50-60 Hz
- Charging current 2 A (x4)
- Charging voltage 16.8 Volts
- Protections: Short circuit / Overload / Over voltage
- Charging indicator led
- Battery not included
- 430 x 250 x 130 mm / 3850 g

DRILL-REAMER HANDPIECE

p.d.2.1. Jėgos instrumentas stambiųjų kaulų chirurginėms operacijoms, skirtas kaulų frezavimo, gręžimo funkcijoms, atliekant vidutinės ir didelės apimties ortopedines chirurgines kaulų procedūras

Six
Different
Trigger
Functions



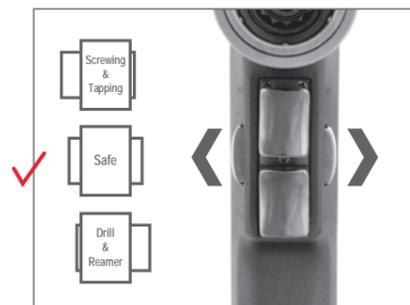
✓ **M206-200**
Hexa - Function Drill System
(Without drills and power box)

- ✓ p.d.2.1.2. Apsukimų greitis ir kryptis tolygiai reguliuojami
- ✓ Dual trigger system for speed control and direction control
- ✓ Steam sterilisable p.d.2.1.1. Instrumentas ir antgaliai autoklavuojami
- ✓ Drill Mode F&R (1200 rpm)
- ✓ Drill Oscillation Mode (1200 cpm) p.d.2.1.4. Maksimalus apsisukimų greitis gręžiant 1200 aps./min.
- ✓ Screwing Mode F&R (150 rpm)
- ✓ Tapping Mode (150 rpm)
- ✓ Reamer Mode F&R (300 rpm) p.d.2.1.6. Maksimalus apsisukimų greitis palėtintam gręžimui „reaming“ 300aps/min.
- ✓ Reamer Oscillation Mode (300 cpm)
- ✓ Cannulated Ø 4 mm
- ✓ 77 x 137 x 212 mm / 920 g



Screwing and tapping options enable smooth control with one-handpiece solution.

p.d.2.1.3. Yra padėtis, kurioje instrumentas saugiai išjungtas



Drilling, Reaming, Screwing and Tapping options in one-handpiece



Forward, reverse and oscillation mode options provide versatile alternatives to the users.

DRILL ATTACHMENTS

✓ **M206-308**
Drill attachment with keyed chuck
Ø4 mm Cannulated
Ø 1.0 mm - 4.0 mm
1200 rpm / 5 Nm
29 x 70 mm / 140 g



M8-473
Chuck key
for M206-308

✓ **M206-309**
Drill attachment with keyed chuck
Ø4 mm Cannulated
Ø 1.0 mm - 7.4 mm ✓
1200 rpm / 5 Nm
29 x 87 mm / 205 g

p.d.2.1.7. Gręžimo antgalis tinkamas grąžtams iki 7,4 mm diametro



M7-250
Chuck key
for M206-309

p.d.2.3. Gręžimo antgalis "Jacobs" tipo su rakteliu, autoklavuojamas

✓ **M206-311**
Drill attachment with hybrid chuck
Both keyed and keyless operation
Ø4 mm Cannulated
Ø 0.3 mm - 3 mm
1200 rpm / 5 Nm
29 x 87 mm / 225 g



M7-253
Chuck key
for M206-311

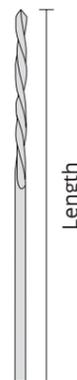
✓ **M206-310**
Drill attachment with hybrid chuck
Both keyed and keyless operation
Ø4 mm Cannulated
Ø 1.0 mm - 7.4 mm
1200 rpm / 5 Nm
34 x 100 mm / 320 g



M7-252
Chuck key
for M206-310

DRILL BITS

Code	(Ø) Diameter mm	Length mm
M7-500	1.5	60
M7-501	2.0	100
M7-502	2.5	100
M7-503	2.7	100
M7-504	3.0	100
M7-505	3.2	100
M7-506	3.5	100
M7-507	4.0	110
M7-508	4.5	130
M7-509	5.0	160
M7-510	6.0	160



SHANK DRILL BIT ATTACHMENTS



M206-360
Attachment for SQUARE shank
1200 rpm / 5 Nm
29 x 75 mm / 115 g



M206-361
Attachment for AO shank
1200 rpm / 5 Nm
29 x 73 mm / 125 g



M206-362
Attachment for TRINKE shank
1200 rpm / 5 Nm
29 x 70 mm / 130 g



SHANK DRILL BITS

Length mm	(Ø) Diameter mm	SQUARE	AO	TRINKE
38	1.5	M7-520	M7-540	M7-560
45	2.0	M7-521	M7-541	M7-561
53	2.5	M7-522	M7-542	M7-562
57	2.7	M7-523	M7-543	M7-563
57	3.0	M7-524	M7-544	M7-564
57	3.2	M7-525	M7-545	M7-565
65	3.5	M7-526	M7-546	M7-566
70	4.0	M7-527	M7-547	M7-567
70	4.5	M7-528	M7-548	M7-568
95	5.0	M7-529	M7-549	M7-569
120	6.0	M7-530	M7-550	M7-570

M206-375
Attachment for OSTEO shank
Ø4 mm Cannulated
300 rpm / 22 Nm ✓
29 x 78 mm / 160 g ✓

p.d.2.1.5. Maksimalus sukimo momentas frezavimui 22 Nm



M206-376
Attachment for DHS shank
Ø4 mm Cannulated
300 rpm / 22 Nm ✓
29 x 100 mm / 170 g



M206-377
Attachment for AO-PROTEK shank
Ø4 mm Cannulated
300 rpm / 22 Nm ✓
29 x 82 mm / 210 g



M206-378
Attachment for HUDSON shank
Ø4 mm Cannulated
300 rpm / 22 Nm
29 x 68 mm / 145 g



M206-320
Attachment for HARRIS shank
150 - 300 rpm / 35 Nm
29 x 80 mm / 175 g



M206-380
Attachment for ZIMMER-HUDSON shank
Ø4 mm Cannulated
300 rpm / 22 Nm
29 x 115 mm / 155 g



M206-381
Attachment for ZIMMER shank
Ø4 mm Cannulated
300 rpm / 22 Nm
29 x 115 mm / 155 g



M206-312
Reamer attachment with keyed chuck
Ø4 mm Cannulated
Ø 1.0 mm - 7.4 mm
300 rpm / 22 Nm
29 x 87 mm / 205 g



M7-250
Chuck key
for M206-312

KARINCA 206 ⁺

Surgical Motor Systems
Battery Operated



 360° Rotational Saw Head

AYGUN[®]
SURGICAL INSTRUMENTS CO., INC.

p.d.2.2. Jēgos instrumentas skirtas pjovimo funkcijoms, atliekant vidutinēs ir lielēs apimties ortopedines chirurgines kaulu procedūras

SAGITTAL SAW SYSTEM



360° Rotational Saw Head

Ip.d.2.2.1. nstrumentas neatsiejamai sujungtas su osciliacinio pjovimo antgaliu



p.d.2.2.7. Baterijos pakeitimas - nuspaudžiant užraktą baterijos dangtelio

M206-301
Sagittal saw system (Rotational Saw Head)
(Without saw blades and power box)

High-Low speed options
Steam sterilisable

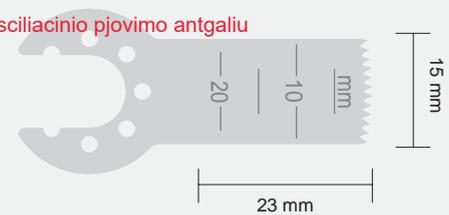
11.000 - 14.000 cpm / $\angle 4,5^\circ$ ✓

77 x 170 x 220 mm / 1120 g

✓ The speed of the handpiece can be adjustable by pressing trigger from 0 to 11.000 cpm on low mode and 0 to 14.000 cpm on high mode.

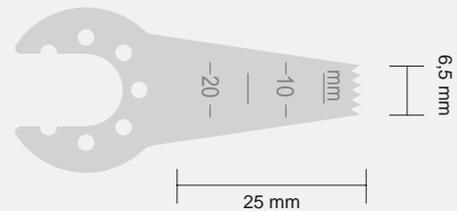
p.d.2.2.6. Bepakopis maksimalus osciliacinio pjovimo greitis iki 14000 ciklų/min

/ SAGITTAL SAW BLADES

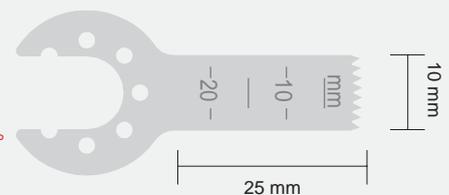


✓ **M103-1110**
Material Thickness : 0.4 mm
Cutting Thickness : 0.6 mm

p.d.2.2.9 osciliuojančios geležtės



✓ **M103-1111**
Material Thickness : 0.4 mm
Cutting Thickness : 0.6 mm



✓ **M103-1112**
Material Thickness : 0.4 mm
Cutting Thickness : 0.6 mm

p.d.2.2.3. Osciliacijos kampas 4.5°



Battery Operated Surgical Motor System
KARINCA 206
SAGITTAL 360° ROTATIONAL SAW

M206-410 Karınca Power Box is attached to Karınca Charging Unit as shown below.



When the Karınca Charger Unit is active, the indicator led on the unit;

- Red : Lights up when the power box is charging.
- Green : Lights up when the charger is active and the power box is fully charged.



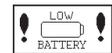
In order to charge the battery in the M206-410 Karınca Power Box, the battery charge level must be below 90% on average. Otherwise, charging will not start.

Charging time is maximum of 90 mins depending on capacity of battery.

When M206-410 Karınca Power Box is mounted on Karınca Charging Unit, Power Box Display Screen (5) is activated and displays the capacity of Power Box.



When the Karınca charging unit starts charging, the device display LED(3) on the unit starts to charge by turning red and the phrase "Battery Charging" is displayed on the display screen(5). This symbol indicates that the power box is charging.



When the battery in the M206-410 Power Box is fully charged and the battery level reaches 100%, "Battery Full" will be displayed on the screen (5) and an audible warning will sound at 30 second intervals.



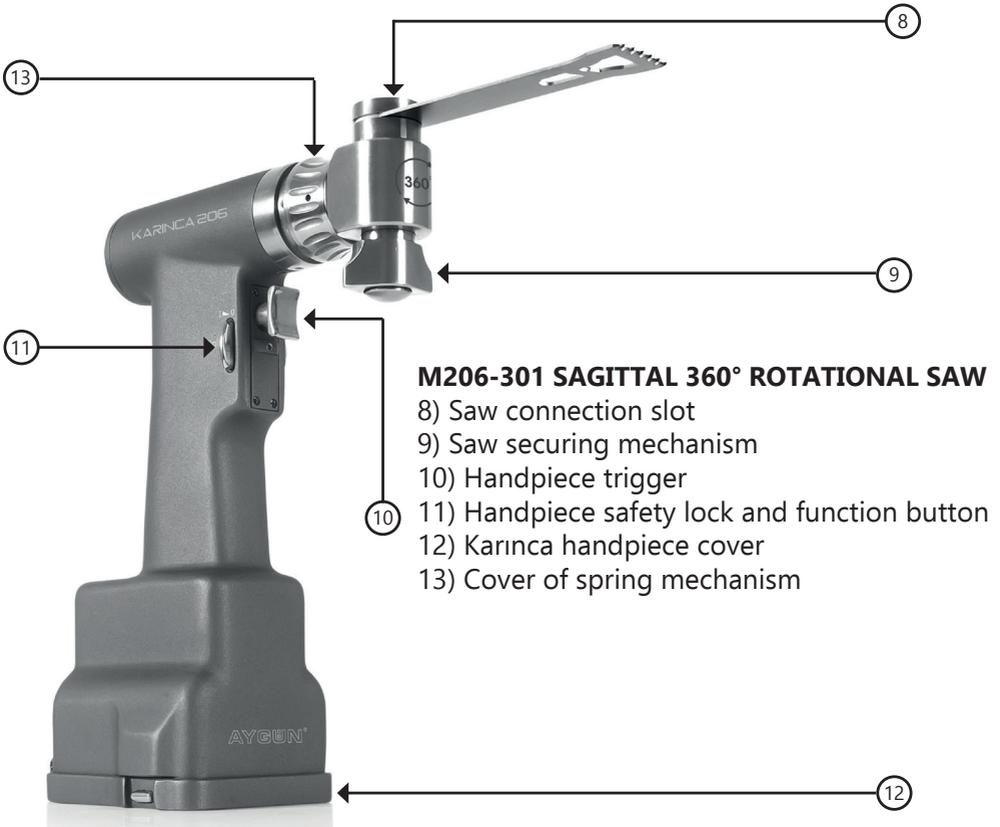
During the use of the M206-410 power box, when the capacity of the battery drops to 0%, a low battery warning appears on the device screen, the device gives an audible warning and the device turns itself off to protect the battery. As long as the battery is not charged, this warning is repeated every time the device is turned on. When the capacity is above 0% and the motor is exposed to overload, high current appears on the screen, the device stops itself by giving an audible warning.

❗ M206-410 Power Box is not suitable for sterilization in autoclave and must not be placed in it.

The working temperatures of motor and electronic components of M206-410 Power Box is constantly measured. When the components heat up above the recommended temperature, a visual warning is displayed on device display and a warning sound is heard which indicates the device is shutting down.

HIGH
TEMPERATURE

❗ M206-410 Power Box must be fully charged before each use. It is not recommended to use it when the battery level is lower than 25%.



2.1 Preparing Before Usage

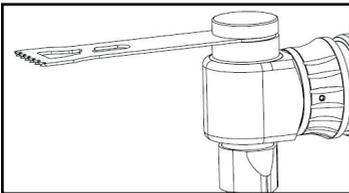
p.d.2.2.5. Yra padėtis, kurioje instrumentas saugiai išjungtas



Before attaching an attachment or power box to M206-301 Karınca Sagittal Handpiece ensure that handpiece's safety lock (11) is located in the middle, in the safe mode and that triggers are locked mechanically.

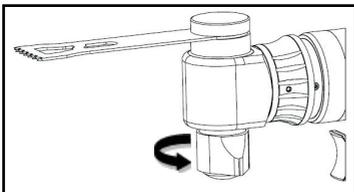
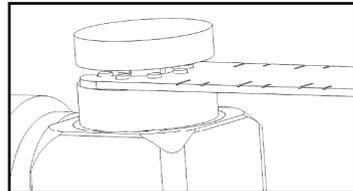
The life span of Karınca 206 product varies depending on the method and number of use and usage during operation. Considering and implementing the warnings in the user manual extends the life of the product and ensures safe operation.

The life span of Karınca 206 Handpiece is 7 years, cannulated drill accessories is 7 years, the battery is 2 years and others are 10 years.

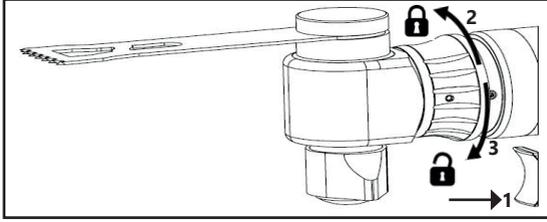


Press on M206-301 Karınca saw securing mechanism (9) and have the upper cover released. You will see that there are eight different pins on the connection slot (8) where the saw blade is to be mounted on.

Place the grooves on the blade according to the pins on the connection slot properly and ensure proper assembly of the blade.



Ensure that the blade is secured, having rotated the securing mechanism (9) in the direction of the arrow as shown in the image to secure the cover.



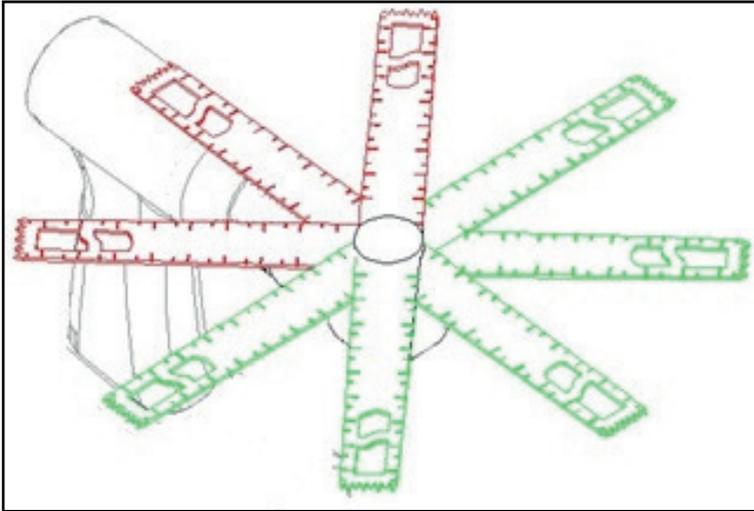
The spring mechanism shown in the figure is pulled in the direction of (1) and the head is turned in the direction of (3), the safety lock is opened and the mechanism is brought to the desired position to be used. The safety lock is closed by turning the head in the direction (2).



Make sure the pins of the head are seated before locking.



Ensure that AYGÜN saw blade is secured properly and that the pins are placed properly on the slots available on the blade.



Saw blade can be mounted on M206-301 Karınca saw handpiece in eight different (360°) directions. However, number of recommended directions is limited to five for proper use. In the figure above, the blade assemblages indicated with green are suitable for use, while the ones indicated with red are not suitable for use.



Before use, saw blade must be mounted on M206-301 Karınca saw handpiece as shown in the figure above as indicated with green. Otherwise, improper assembly and use may cause harm to the user.



p.d.2.2.4. Osciliacinio pjovimo antgalio fiksavimo kampas reguliuojamas 8 padėtyse

✓ M206-301 provides use in 8 different positions (360°) with a 45 degree pitch as shown in the figure.



Before use, the position of the saw blade and the M206-301 head should be adjusted accordingly. Otherwise, misuse may harm the user.

3. TECHNICAL SPECIFICATIONS

M206-410	Karınca Power Box(Motor and Battery)
Type of Battery	Li-Ion
Operating Voltage (V)	14.8
Power (Watt)	350 ✓ <i>Jėgos instrumento galingumas 350W</i>
Battery Capacity (mAh)	2500
Dimensions	75x61x160 mm
Weight (g)	540
Arch Protection ClassI	EC 60601-1-2, 60601-1

M206-411	Battery Pack
Type of Battery	Li-Ion
Operating Voltage (V)	14.8
Battery Capacity (mAh)	2500
Dimensions	68x56x35 mm
Weight (g)	240

M206-301	Karınca Sagittal 360° Rotational Saw
Dimensions	77x170x222 mm
Weight (g)	1100
Sagittal Saw Low Speed(cpm)	0 - 11.000 cpm (Adjustable)
Sagittal Saw High Speed(cpm)	0 - 14.000 cpm (Adjustable) ✓
There are two options on handpiece, 11.000 and 14.000 cpm	

p.d.2.2.6. Bepakopis maksimalus osciliacinio pjovimo greitis iki 14000 ciklu/min

3.1 Environmental Conditions Which Influence Use



Do not store or use in explosive environments.

The following table shows the factors influencing use due to environmental conditions.

	OperationT	ransportation and Storage
Temperature	10 – 27 °C	-20 - 40°C
Relative Humidity	30 - 75 %	10 - 75 %
Atmospheric Pressure	700 - 1060 hPa	500 - 1060 hPa

4.2. Lubrication



Before the sterilization process, the Karınca 206 system should be operated. The purpose of operating after lubrication is to ensure that the oil spreads to all mechanical parts

For lubrication, AYGÜN M14-816 coded spray oil is recommended. We also recommend that Pana Spray Plus or Lubricare or Dr. Weigert as an alternative.

4.3. Sterilization



Power Box certainly cannot be sterilized !!

Product Not Be Sterilized
M206-410 Karınca Power Box
M206-411 Karınca Battery Pack
M206-226 Karınca Battery Charger w/1
M206-227 Karınca Battery Charger w/2
M206-229 Karınca Battery Charger w/4

All products and accessories mentioned above are suitable for the sterilization and cleaning methods described below.



Products and accessories must be kept sterile and clean then not in use.



As carcinogenic, toxic, and allergic substances such as ethylene oxide may partially be absorbed by the parts of the system during sterilization, they may pose danger for the patient and the operator. Such sterilization material shall never be used.

Sterilization Method	Temperature	Duration	Standard
Pressurized Steam	121 C °	20 min	DIN 58946/DIN 285
	134 C °	3,5 min-5 min	DIN 58946/DIN 285
	134 C °	18 min	