



Medical High TorQ Power Tools for medium and large Bone Surgery



Orthopaedic Surgery

HighTorQ Power Tools

Drilling and reaming

Sterilizing battery-powered instruments is a heavy strain on the battery and all the electrical and electronic components. These components require rigorous protection from the impact of sterilization. The power tool concept for major bone surgery separates the drive unit with control electronics and motor from the rest of the instrument by means of a hermetically sealed compartment which results in the complete elimination of the need to sterilize these key components. A „non-sterile“ person inserts the non-sterilised Power-Pack into the instrument using a sterile funnel and the „sterile“ person closes the cover over it.



The perfectly thought-out concept of surgi

HighTorQ Power Tools

Reciprocal Saw / Oscillating Saw / Sternum Saw

The Power-Pack contains the software for every controllable power tool. This mode of construction drastically extends the sensitive components' service life without significantly restricting the units in their use. The perceived high quality and the award-winning design of the whole power-battery system is an ideal match to the well-known Nouvag philosophy of providing the medical sector with high-utility units, sophisticated technology and lengthy durability.

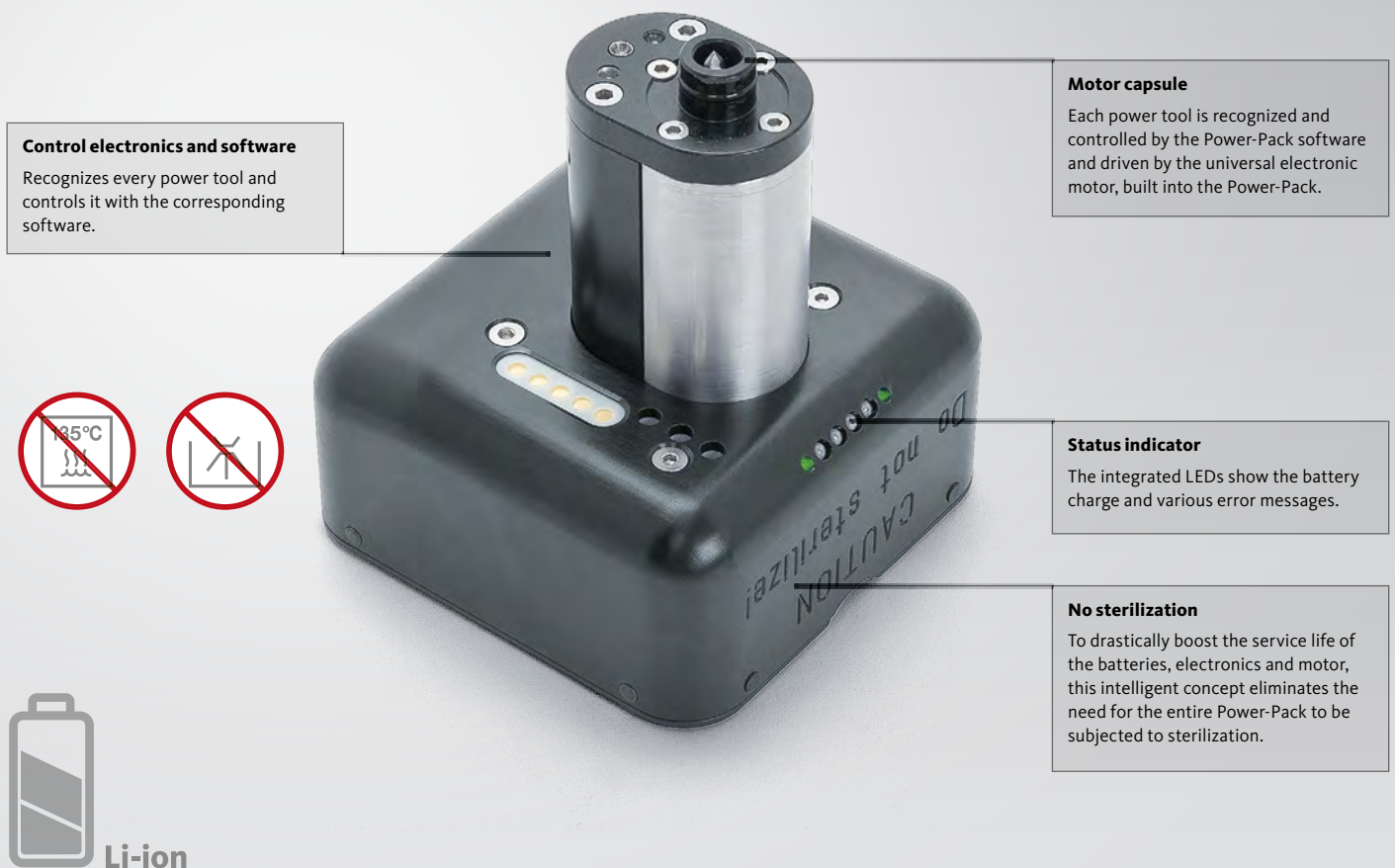


cal power tools with power-battery system

The heart of the system

Power Pack

“Universal Drive System” powered by a lithium-ion battery, integrated electronic motor, control electronics and software.



It's the extra power that matters!

- The universal drive unit (Power-Pack) is inserted into the power tool through a sterile funnel during surgery.
- The universal drive unit automatically recognizes the various power tools and adjusts to the respective requirements as to power, speed and function.
- The universal drive unit uses the latest high-power density lithium-ion technology with no memory effect and a capacity of 2.1 Ah.
- The status display of clearly visible colored LEDs enables the exact charge to be read even while operating. In addition, the 4 white LEDs also illuminate the surgery site.
- The recessed carrying handle embedded in the base enables the Power-Pack to be very easily inserted into every sterile power tools without jeopardizing their sterility.

Hermetically sealed Power Pack loading procedure



REF: 3705
Non-sterilizable
Power-Pack



REF: 3725
Sterile funnel

Power Pack compartment

The universal Power Pack compartment of each HighTorQ Power Tool is opened by two latches on each side of the Power Tool. The hermetically sealed, hinged lid simultaneously acts as solid bottom of the handpieces.



Sterile person



- Open both latches of the battery compartment of the sterile power tool and open the cover all the way it goes.
- Place the sterile funnel over the open port of the power tool.

135°C



Non-sterile person



- Using the carrying handle insert the Power-Pack into the aperture of the power tool and then recess the carrying handle back into the hollow.



- Remove the sterile funnel.
- Shut the cover and close the latches of the battery compartment.

135°C

Drill & Reamer / Oscillating Reamer Power Tool

Drilling and reaming with one,
oscillating reaming with the other tool



Pin and wire REF 3708

Transfixion wire chuck for Drill & Reamer (3701nou) for wires with a Ø of 1.00 – 4.00 mm



REF 3710

Protective sleeve for Kirschner transfixion wire chuck for universal drill (3700nou) and drill & reamer (3701nou)



REF 3718

Jakobs drill chuck with key. Span Ø 4.0 mm



REF 3720

Röhm drill chuck with key. Span Ø 7.0 mm



REF 3721

Quick-action drill chuck with lock. Span Ø 6.0 mm

- Drill with 2 speed ranges 0 – 250 rpm and 0 – 1000 rpm.
- Numerous drilling and milling chucks expand the field of application.
- When using the quick-coupling for Kirschner wires, an extension connector can be screwed on to the rear of the unit to protect the user.
- The unit features an oscillation mode, lock position, forward and reverse motion.



REF 3712

AO attachment for drilling and milling. Cannulation Ø 2.5 mm



REF 3713

AO attachment for drilling and milling. Cannulation Ø 4.3 mm



REF 3714

Quarter inch coupling with cannulation Ø 4.3 mm



REF 3715

Hudson attachment with cannulation Ø 4.3 mm



REF 3716

Harris attachment with cannulation Ø 4.3 mm



REF 3717

Hexagonal attachment with cannulation Ø 4.3 mm



REF 3752

Aesculap DIN adaptor



REF 3754

Zimmer Hall attachment

These Power Tools are suitable for drilling and milling, for which they feature two speed ranges. The second machine features also an oscillation mode.



REF: 3701nou
Drill & Reamer Power Tool

REF: 3756nou
Oscillating Reaming Power Tool

Universal drill

Drilling continuously or in oscillating mode.

- The perfect power tool when it comes to drilling.
- Special Kirschner quick-coupling available for this Drilling Power Tool with extension connector.
- Switchable to oscillation mode.
- Lock position, forward and reverse motion.



Pin and wire REF 3709

Transfixion wire chuck for universal drill (3700nou) for wires with a \varnothing of 1.00 – 4.00 mm



REF 3710

Protective sleeve for Kirschner transfixion wire chuck for universal drill (3700nou) and drill & reamer (3701nou)



REF 3718

Jakobs drill chuck with key. Span \varnothing 4.0 mm



REF 3720

Röhms drill chuck with key. Span \varnothing 7.0 mm



REF 3719

Jakobs drill chuck with key. Span \varnothing 6.5 mm



REF 3722

Quick-action drill chuck. Span \varnothing 6.0 mm



To be used for every drilling attachment and the Kirschner transfixion wire chuck.



REF: 3700nou
Universal drill

Sternum Saw and Reciprocating Saw



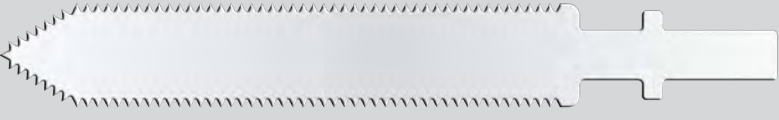
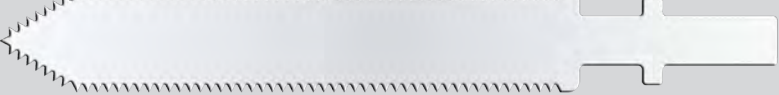
Two functions in one Power Tool

Blade thickness		REF
0.60 mm		KM97
0.80 mm		KM97A

The working length of the blade is accordingly to the Sternum saw 31 mm.

- Use with a special saw blade which matches the length of the protective bracket.
- Enables very precise cuts and smooth control.
- Ideally suited for use with coolant.
- Tool-free tensioning of the saw blade through the protective bracket.
- Locking function.

- For using saw blades with a Stryker connector.
- A stroke of 4 mm for perfect cutting results.
- 2 speed settings available.
- Tool-less quick-action tensioner for inserting the saw blade.
- Locking position

Thick-ness mm	Working length mm		REF
0.80	77.5		KM325R
0.60	60.0		KM250R
1.00	67.9		KM277R
0.60	67.9		KM275R

For thoracic surgery, and particularly for working on the sternum. Protection for internal organs. Without the protective bracket attached it functions as a normal reciprocating saw.

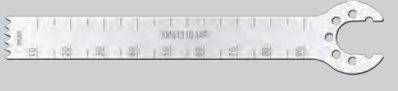
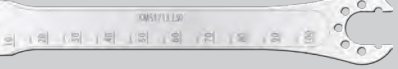






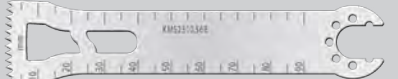







REF: 3704nou
Sternum Saw
configuration



REF: 3704nou
Reciprocating Saw
configuration

Oscillating saw

T * mm	W ** mm	L *** mm		REF
1.00	13	90		KMS1310.58R
1.19				KMS1312.59J
1.27				KMS1313.57S
1.27	17	100		KMS1713.L50
1.27				
1.27	19	90		KMS1913.51S
1.37				KMS1914.51T
1.19	19	100		KMS1912.L50
1.00				
1.27	22	90		KMS2210.56F
1.27				KMS2213.57F
1.00	25.4	70		KMS0004.SY
1.00				
1.00	19	70		KMS0001.SY
1.19				
1.19	13	70		KMS1312.S50
1.00				
1.19	25.4	90		KMS2510.56B
1.27				KMS2512.55J
1.37				KMS2513.55S
1.37				KMS2514.55T
0.60	27	68		KM519.017
0.60				
0.60	19.5	68		KM519.012
1.00				
1.19	13	90		EZ1310.M50
1.27				EZ1312.M50
1.37				EZ1313.M50
1.37				EZ1314.M50
1.19	19	90		EZ1912.M50
1.27				EZ1913.M50
1.37				EZ1914.M50
1.00	22	90		EZ2210.M50
1.19				EZ2212.M50
1.27				EZ2213.M50
1.37				EZ2214.M50



- Tool-free tensioning of the saw blade by turning the grooved knob.
- The saw blade position is adjustable in 45° steps by turning the whole head through 360°.
- The saw blade can be inserted in 5 different positions to find an appropriate angle for use.
- Locking function.

* T: Blade thickness ** W: Working width *** L: Working length
Further sawing blade versions available on request

Precise working with very little vibrations, in areas where the jig-saw cannot reach.



REF: 3702nou
Oscillating Saw, 4°

REF: 3755nou
Oscillating Saw, 2°

Accessories

Sterilization / Maintenance and care

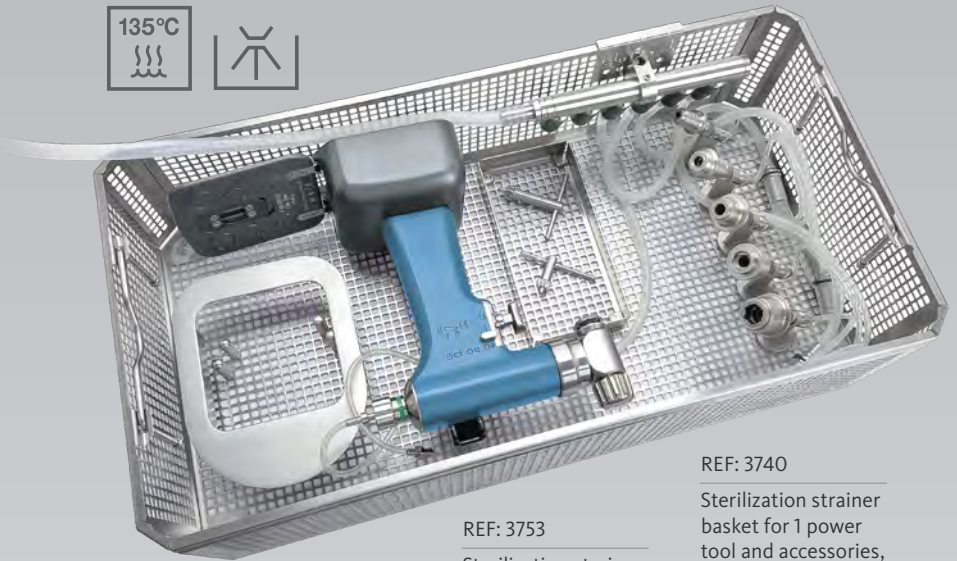
The strainer baskets for the sterilization of the HighTorQ power tools, including accessories, have been specially developed to achieve a perfect placement for the HighTorQ power tools and accessories. An efficient loading of the baskets and the consistently high quality of the sterilization are therefore always guaranteed.

The precise placement of the instruments and accessories protects the surfaces by preventing them from slipping and colliding.

The flushing system in the sterilization basket ensures reliable flushing of the channels.

The green-coded flushing adapter (for all HighTorQ power tools) must therefore be attached to the rear end of the HighTorQ power tool.

No adapter is required for accessories, the flushing hose must be attached directly to the channel to be flushed.



REF: 3753
Sterilization strainer basket for 2 power tools and accessories, including lid

REF: 3740
Sterilization strainer basket for 1 power tool and accessories, including lid

Rinsing adaptors for the rinsing of channels while reprocessing

REF Rinsing adaptor	REF and name of Power Tool
3734 Red	3704nou Reziprocal Saw/ Sternum Saw
3733 White	3700nou Universal Drill 3701nou Drill and Ream Power Tool
3732 Green	for all HighTorque Power Tools universally usable

Spray adapter for the maintenance and care of the Power Tools

REF spray adapter	REF and name of Power Tool
3728 Purple	Universally usable for all HighTorQ Power Tools
3729 Orange	3700nou Universal Drill 3701nou Drill and Ream Power Tool
3730 Blue	Reziproating Saw/ Sternum Saw



REF: 3724
Maintenance stand

The purpose is to keep instrument maintenance as easy as possible. To facilitate this, use the maintenance stand.

When the instrument is in a suspended position, all the areas requiring lubrication can be easily reached by the care spray's tube.

To maintain the inner surfaces, use the care aids. These eliminate the need to unscrew the instrument.

Charging stations

Power Pack charging

The charger is not only able to charge the battery; it can and should be the storage site for the battery if it is not being used, as batteries which are not regularly used slowly discharge. As long as the battery remains in the charger, it ensures that the battery is always fully charged.

For daily use and for larger departments there is also a charger available with 2 and 4 battery charging bays. This ensures that there is at least one spare battery at the ready.

A reflective surface on the charger reflects the LEDs on the Power-Pack which always display the current charge.

The ready indicator on the right-hand side of the charger informs whether the unit is plugged in and charging can take place.



Battery charger with 2 bays



Battery charger with 4 bays

	Battery charger with 1 charging bay	Battery charger with 2 charging bays	Battery charger with 4 charging bays
Order number (REF)	3706	3751	3707
Dimensions, excl. cable	157 x 140 x 79 mm	322 x 140 x 79 mm	636 x 140 x 79 mm
Weight	1740 g	3480 g	6960 g
Type	Lithium-ion battery charger	Lithium-ion battery charger	Lithium-ion battery charger
Input	100 – 240 VAC, 50/60 Hz, 0.9 A	100 – 240 VAC, 50/60 Hz, 0.9 A	100 – 240 VAC, 50/60 Hz, 0.9 A
Output	16.8 VDC, 2.0 A	16.8 VDC, 2.0 A	16.8 VDC, 2.0 A



Technical data

Universal Drill, REF 3700nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 1000 rpm
Cannulation	Ø 4.3 mm
Weight, Handpiece incl. Power Pack	1660 g
Dimensions	140 x 111 x 206 mm

Drill and Reamer, REF 3701nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 1000 rpm (drill mode) 0 – 250 rpm (ream mode)
Cannulation	Ø 4.3 mm
Weight, Handpiece incl. Power Pack	1850 g
Dimensions	166 x 111 x 207 mm

Oscillating Reamer, REF 3756nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 9 000 rpm (Step I) 0 – 11 000 rpm (Step II)
Weight, Handpiece incl. Power Pack	1550 g
Dimensions	140 x 111 x 206 (without attachment)

Sternum Saw/Reciprocating Saw, REF 3704nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 7 500 rpm (Step I) 0 – 10 000 rpm (Step II)
Weight, Handpiece incl. Power Pack	1750 g
Dimensions	185 x 111 x 206 mm

Oscillating Saw 4°, REF 3702nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 9 000 rpm (Step I) 0 – 11 000 rpm (Step II)
Weight, Handpiece incl. Power Pack	1760 g
Dimensions	166 x 111 x 211 mm

Oscillating Saw 2°, REF 3755nou

Power supply	internal, rechargeable battery
Protection class	B, EN 60601-1
Continuously adjustable rotation speed	0 – 9 000 rpm (Step I) 0 – 11 000 rpm (Step II)
Weight, Handpiece incl. Power Pack	1760 g
Dimensions	166 x 111 x 211

Brochures may represent products that are not available in all markets.



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