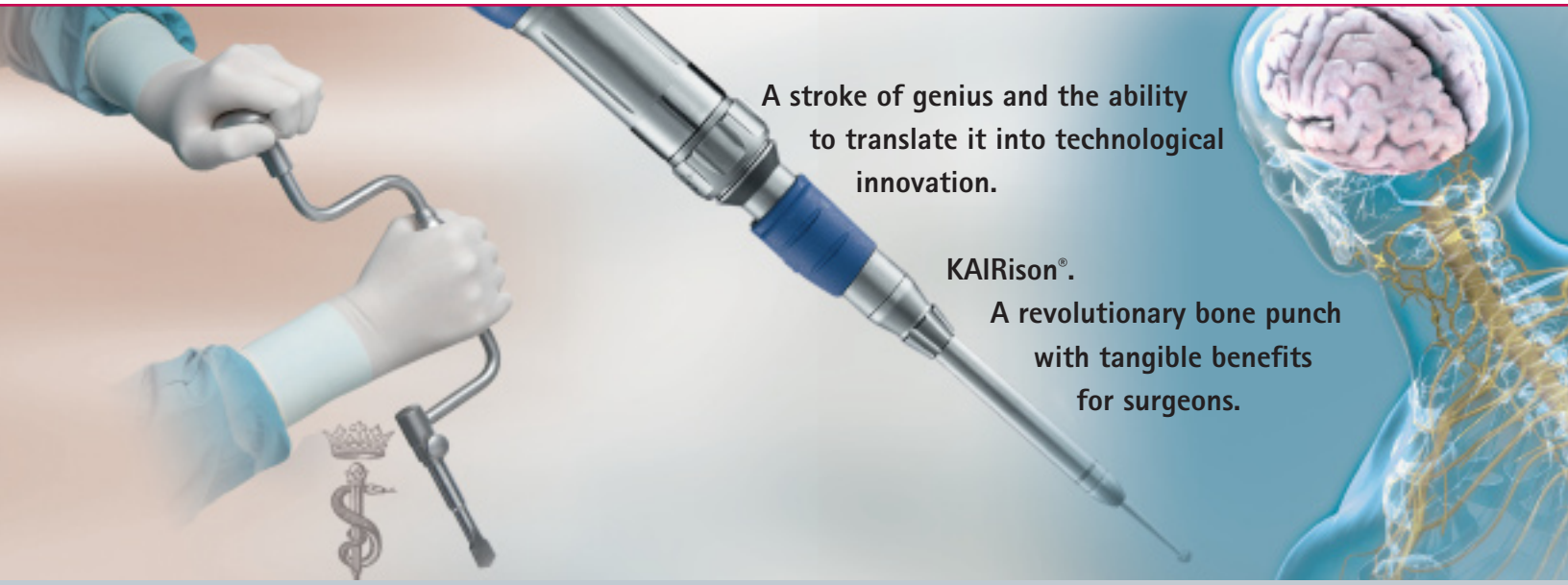
Pneumatic Kerrison

Technology that makes life easier.

Aesculap Neurosurgery

AESCULAP®

Air: The Elementary Solution.



A stroke of genius and the ability to translate it into technological innovation.

KAIRison®. A revolutionary bone punch with tangible benefits for surgeons.

The problem

Strenuous manual work?
An excessive strain?

Spine surgery requires total concentration and considerable strength. This is particularly true when the surgeon has to remove significant amounts of bone material, for example in vertebral canal stenosis or decompression procedures.

Time for a change.

Until now, rapid fatigue and hand, joint and arm pain have been unwelcome but constant companions for Spinal Surgeons, Orthopedists and Neurosurgeons. The time has come to rethink the traditional Kerrison Bone Punch.

The idea

Prof. Fabrizio Caroli, Dr. Laura Raus,
National Cancer Institute of Rome, Italy

"The inspiration for the pneumatic Kerrison bone punch came from the need for a completely new system. The aim was not simply to develop an additional surgical instrument, but innovative technology—A system that permanently and reliably combines precision and power and minimizes physical effort on the part of surgeons. We know that the new pneumatic KAIRison fulfills all of these requirements. And we are convinced that KAIRison will enter the neurosurgical history."

Developed in cooperation with:

Prof. Fabrizio Caroli,
Dr. Laura Raus,
IFO Regina Elena; Rome

KAIRison®

Technology that makes life easier.

The solution

KAIRison, pneumatic bone punch
Safe and powerful, nature's way.

Air is a fascinating element. Pneumatics, the use of pressurized air to effect mechanical motion, is widely used in science, medicine and industry. This simple, robust and easily available technology is increasingly found in surgical instruments.

Tried and trusted.

In conjunction with more sophisticated device design, pneumatics has become safer, more reliable and therefore more widespread. It was tried and tested with drills long ago. Now it's the KAIRison bone punch's turn. This innovative tool is safe, enables cutting with very little effort and offers remarkable reliability.

KAIRison® Pneumatic Bone Punch

The benefits

- Easy handling
- Reduces physical effort required
- Relieves strain on hands and joints
- Less risk of reduced motor skills through fatigue
- Innovative safety mechanism
- Short learning curve
- Excellent balance
- Suitable for right- or left-handed use
- Reliable; does not jam
- Ergonomic design

The reaction

"My first reaction after using the KAIRison was to wonder why this unique tool had not been invented 20 years sooner."

Dr. Joseph Maroon,
UPMC
Pittsburgh, PA, USA

To lock and open

Quick and easy shaft replacement

Safety first

Apply the safety catch to block the trigger mechanism when cleaning the punch.

Complete control

There are two power settings. For positioning the bone punch, apply light pressure to the trigger and stop when you meet resistance. To cut bone, apply full pressure to the trigger. Release the trigger to stop the flow of air at any time, and return the bone punch to its original position – without punching.

ON and OFF

When the bone punch is not in use, deactivate the system via the on/off switch to prevent accidental operation.

Air on tap

Simply connect to the existing nitrogen outlet in the O.R.

KAIRison® Pneumatic Bone Punch

A user-friendly tool, a career-extending tool

Dr. Joseph Maroon
UPMC
Pittsburgh, PA, USA

"Aesculap's pneumatic Kerrison will add years to my spine surgery career. I have experienced none of the hand and joint pain I typically have after a routine laminectomy. KAIRison is similar to a regular Kerrison punch in terms of feedback, control and speed – but makes cutting effortless. This pneumatic Kerrison bone punch will become the bone-cutting tool of choice – a must for spinal surgeons in the US."

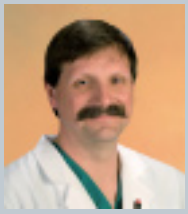
Dr. Joseph Maroon

UPMC, Pittsburgh, PA, USA.

An effective and reliable system

Dr. Thomas A. Kopitnik, Jr.
Cheyenne Regional Medical Center
Cheyenne, Wyoming, USA

"This efficient and very precise punch enables OR staff to cut bone with no effort. For example, it is very easy to perform a lumbar fusion where you have to cut significant amounts of bone material. Because I can operate without a standard bone punch or my drill system, I save time. In my opinion, this instrument is a must. I will not work without it when I have to cut large quantities of bone material."



Dr. Thomas A. Kopitnik, Jr.

Cheyenne Regional Medical Center, Wyoming, USA

Use the blocking lever during bone fragment removal to prevent inadvertent actuation.

A well-balanced, reliable, and safe instrument

PD Dr. Tobias Pitzen
University Hospital
Homburg, Germany

"Neurosurgeons who want to protect their fingers will spare their skills which are really in need during microsurgical steps of dissection. This is particularly important for operations at the posterior cranial fossa or during spinal surgeries. Whenever facing a vertebral and thick bone e.g. at the occiput and posterior spine that has to be removed for microsurgical approaches to the cerebellum and spinal cord, the system avoids any fatigue in surgeons wrist. This punch reduces physical effort and can be even used right- or left-handed. Because of its easiness and safety, it just needs a short learning curve."

PD Dr. Tobias Pitzen
University Hospital, Homburg

KAIRison® Pneumatic Bone Punch

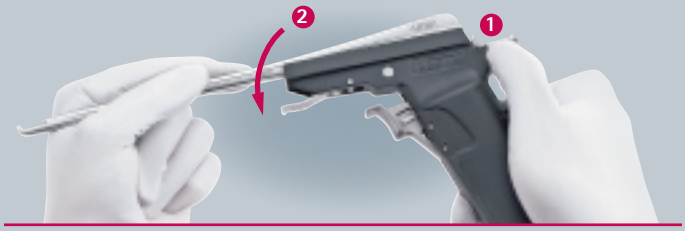
Ready for use in just three easy steps *

1 Connect the hose to the nitrogen outlet in the OR. Then connect the disposable tubing to the pressure reducer and handle.

2 Insert the shaft and lower towards the handle until you hear it click into place. Please check the shaft is positioned correctly (arrows aligned).

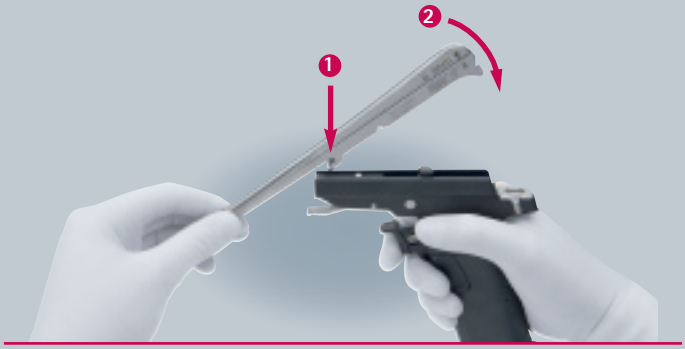
3 Switch the KAIRison on. It is now ready to use. It's that simple!

Easy shaft replacement *



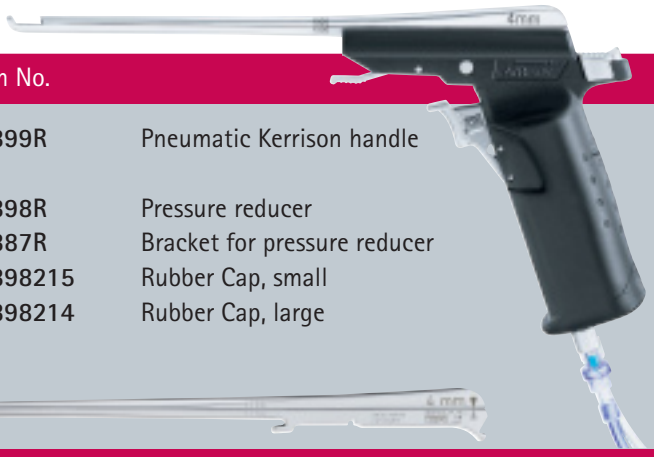
1 Pull the lever (1) and turn the shaft (2).

2 To detach the shaft just lift it up.



3 Insert the new shaft (1) and lower towards the handle until you hear it click into place (2) – "click"

* Please refer to IFU for complete instructions for use.



Item No.		
FK899R	Pneumatic Kerrison handle	
FK898R	Pressure reducer	
FK887R	Bracket for pressure reducer	
FK898215	Rubber Cap, small	
FK898214	Rubber Cap, large	

Length	Item No.	Width	Footplate	Jaw opening	Ejector
235 mm	FK882R	2 mm	standard	12 mm	✔
	FK883R	3 mm	standard	12 mm	✔
	FK884R	4 mm	standard	12 mm	✔
	FK885R	5 mm	standard	12 mm	✔
	FK886R	6 mm	standard	12 mm	✔
285 mm	FK892R	2 mm	standard	12 mm	✔
	FK893R	3 mm	standard	12 mm	✔
	FK894R	4 mm	standard	12 mm	✔
	FK895R	5 mm	standard	12 mm	✔
	FK896R	6 mm	standard	12 mm	✔

FK888SU

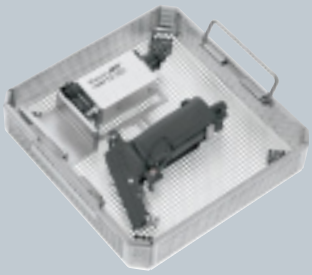
Disposable high pressure tube set (3 m)
Sales unit: PAK = Package of 10 tubes

GA468

Pneumatic hose (5 m) with Aesculap-Schrader connection

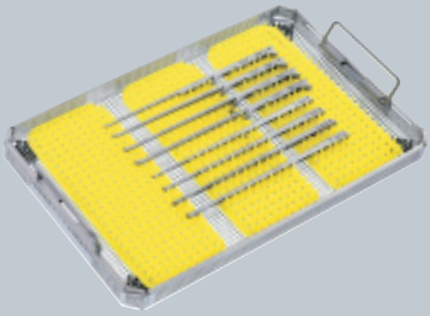
FK881R

Storage rack for KAIRison handle and pressure reducer



FK891R

Storage rack for KAIRison shafts



Notes

Notes

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Aesculap, Inc. | 3773 Corporate Parkway | Center Valley, PA | 18034
Phone 800-282-9000 | Fax 610-791-6886 | www.aesculapusa.com

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