

### In large bone surgery



### SEVEN LARGE BONE PROCEDURES: ONE AP

#### **Drilling**

Bone preparation to accept surgical screws

#### Screwdriving

Fixation of bone plates, nails and internal reduction devices

#### Reaming (intramedullary)

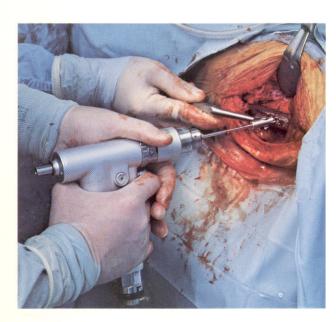
Preparation of intramedullary canal of femur for implant

#### Reaming (acetabulum)

Preparation for joint repair

#### Sawing (oscillating)

Large bone osteotomy, removal of femoral head in preparation for implant



#### Instrumentation:

L-110 Jacobs Chuck Insert Drills





#### Instrumentation:

L-112 Trinkle Chuck Insert D-520 Automatic Screwdriver Insert Bits Screws





#### Instrumentation:

L-113 Hudson Chuck Insert Intramedullary Reamer





#### Instrumentation:

L-150 Reaming Driver Insert L-296 Holding Handle Mira Reamers





Instrumentation: L-120A Oscillating Saw Insert

Blades





## 3M MAXI-DRIVER

Air Instrument System

### PROACH

### Sawing (reciprocating)

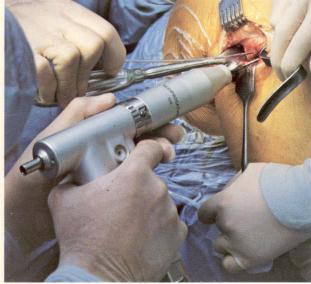
Large bone osteotomy preparation of tibial plateau for implant



#### **Pinning**

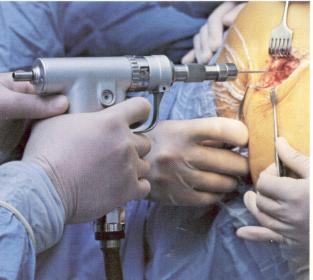
Internal placement of pins temporary fixation of large bones, guides for x-ray and reaming, anchoring traction devices





Instrumentation:
L-140A Reciprocating Saw Insert
Blades





Instrumentation: L-111 Automatic Pin Insert Steinmann pins





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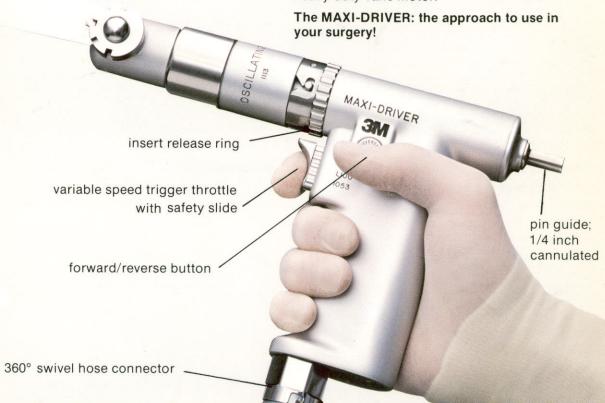
### 3M MAXI-DRIVER

Air Instrument System

Patent Pending

the multi-purpose handpiece designed with interchangeable inserts for insurgery convenience and operating efficiency

Contoured and comfortably balanced, the Maxi-Driver develops sufficient power to deliver the speed and torque necessary for large bone surgery. All inserts can be changed quickly and easily without tools and the Maxi-Driver's unique positive locking mechanism minimizes the possibility of inserts disengaging during use. The handpiece is made of stainless steel and anodized aluminum and is powered by a dependable, heavy duty vane motor.



#### L-110 Jacobs Chuck Insert



Chuck is cannulated and will accept drills, pins and accessories up to 1/4 inch diameter.

#### L-112 Trinkle Chuck Insert



Chuck accepts screwdrivers, twist drills and other accessories that have Trinkle arbors.

#### L-113 Hudson Chuck Insert



Chuck is cannulated and accepts accessories that have Hudson arbors.

#### L-120A Oscillating Saw Insert



The saw insert can be engaged into the handpiece in four positions. Blades can be attached in five positions No tools are required to attach or remove blades. Blades oscillate at 11,000\*cycles per minute with a maximum 1/4 inch excursion arc.

L-121 13mm, standard cut

L-122 31mm, standard cut

L-123 13mm,thin cut

L-124 31mm,thin cut

L-125 8mm,thin cut

#### L-140A Reciprocating Saw Insert



The saw insert can be engaged into the handpiece in four positions. Blades can be inserted in two positions. No tools are needed to insert or remove the blades. Positive blade locking mechanism minimizes chance of blades disengaging during surgery. Blades reciprocate at 3000 strokes per minute with a 1/4 inch stroke.

P-510 68.5 mm fine tooth P-511 68.5 mm coarse tooth P-512 94 mm coarse tooth P-513 94 mm fine tooth

#### **D-520 Automatic Screwdriver**



The screwdriver insert is designed with a unique four-ball holding mechanism that securely grasps a screw for positive positioning and driving without wobble. The screwdriver is made of stainless steel and features an automatic self-releasing collet that allows a screw to be inserted or removed without the screwdriver disengaging.

The insert is available with three interchangeable stainless steel bits — slotted, cruciate and Phillips. The D-520 insert fits into a L-112 Trinkle Chuck Insert for use with a Maxi-Driver.

Also available: D-524 Automatic Screwdriver Insert with hex bit for AO/ASIF screws.

Screwdrivers conform to ASTM specification F116.

#### L-150 Reaming Drive Insert L-296 Holding Handle



Reaming drive insert develops low speed and high torque for heavy duty reaming. The insert reduces the Maxi-Driver speed to 220 rpm. Holding handle provides additional stabilization.

#### L-111 Automatic Pin Insert

Patent No. 3975032



The quick-release chuck lever allows pin insertion and advancement without the use of additional keys and accessories. Internal cannulation of insert will accommodate wires and pins from 1/16 inch (1.6 mm) to 5/32 inch (4.0 mm).

#### M-306 Autoclave Case



Made of stainless steel, the autoclave case was designed specifically for sterilization of powered instruments.

# Maxi-Driver II

**3**M

POWERED INSTRUMENT SYSTEM

- Modular system with interchangeable inserts for drilling, screwdriving, reaming, sawing and pinning.
- Powerful, high-torque handpiece is contoured, comfortably balanced and durable.
- All inserts change quickly and easily without tools.
- Unique positive lock minimizes possibility of inserts disengaging during use.

   Maxi-Driver I

#### L-100 Handpiece



#### **Specifications**

- Vane motor
- Variable speed: 0-960 rpm (nominal)
- Stall torque: 29.2 in-lb (3.3 neuton-meters)
- Weight: 31.4 oz (855g)
- · Normal operating pressure: 100 psi (688 KPa)
- · Nitrogen consumption: 12 scfm (.0057 meters<sup>3</sup>/sec)
- · Material: Anodized aluminum/stainless

#### Inserts & Accessories L-110 Jacobs Chuck Insert



· Cannulated, accepts drills, pins and accessories up to 1/4 in (6.3 mm) diameter.

#### L-112 Trinkle Chuck Insert



· Fully cannulated, accepts screwdrivers, twist drills and other accessories with Trinkle arbors.

#### L-113 Hudson Chuck Insert



· Fully cannulated, accepts accessories with Hudson arbors.

#### L-150 Reaming Drive Insert



• Fully cannulated, insert develops low speed and high torque for heavy duty reaming; reduces Maxi-Driver II system speed to 250 rpm. Stall torque: 115 in-lb

#### L-296 Holding Handle

· Handle provides additional stabilization.

#### L-120A Oscillating Saw Insert



- · Four position saw; five position blades.
- · No tools required to insert or remove
- Blades oscillate at 17,000 (nominal) cycles per minute with maximum 1/4 in (6.3 mm) excursion arc.

#### Oscillating Blades, Steril-Packaged

| Cat.<br>No. | Blade<br>Width | Overall<br>Length* | Cut<br>Thickness |
|-------------|----------------|--------------------|------------------|
| L121        | 13mm           | 85mm med.          | 1.7mm std.       |
| L122        | 29mm           | 85mm med.          | 1.7mm std.       |
| L123        | 13mm           | 85mm med.          | 1.2mm fine       |
| L124        | 29mm           | 85mm med.          | 1.2mm thin       |
| L125        | 6mm            | 53mm short         | 1.1mm thin       |
| L126        | 13mm           | 85mm med.          | 1.7mm std.       |
| L127        | 29mm           | 85mm med.          | 1.7mm std.       |
| L128        | 29mm           | 84mm med.          | 1.0mm x-fine     |
| L129        | 13mm           | 84mm med.          | 1.0mm x-fine     |
| L130        | 29mm           | 98mm long          | 1.0mm x-thin     |
| L131        | 29mm           | 98mm long          | 1.0mm x-thin     |
| L132        | 29mm           | 98mm long          | 1.7mm std.       |
| L133        | 29mm           | 98mm long          | 1.3mm thin       |
| L134        | 19mm           | 98mm long          | 1.9mm thick      |
| L135        | 19mm           | 98mm long          | 1.3mm thin       |

#### L-140A Reciprocating Saw Insert



- · Four position saw; two position blades.
- · No tools required to insert or remove blades.
- Blades reciprocate at 4.800 strokes per minute with 1/4 in (6.3 mm) stroke.

#### Reciprocating Blades, Sterile Packaged

| Cat.<br>No. | Overall<br>Length* | No teeth per cm. |
|-------------|--------------------|------------------|
| P510        | 68.5mm             | 7.0 fine         |
| P511        | 68.5mm             | 5.5 coarse       |
| P512        | 94mm               | 5.5 coarse       |
| P513        | 94mm               | 7.0 fine         |

#### L-111 Automatic Pin Insert



- · Quick-release for easy pin insertion and advancement.
- Internal cannulation accommodates wires and pins from 1/16 in (1.6 mm) to 32 in (3.96 mm).

#### D-520 Automatic Screwdriver Insert D-524 Automatic Screwdriver Insert



- · Unique holding mechanism enhances stability of bone screw for positive positioning.
- · All stainless steel with self-releasing collet that allows the screw to be inserted or removed without the screwdrivers disengaging.
- · Automatic Screwdriver inserts, fit into L-112 Trinkle Chuck insert for use with the Maxi-Driver II system.

• D-520 Screwdriver with D-521-Slotted bit D-522—Cruciate bit D-523-Phillips bit • D-524 Screwdriver with D-525-Hex bitfor ASIF/AO screws