**Electric Pen Drive.** Compact system for a wide range of applications.

- **Ergonomic drive unit with powerful motor**
- **Extensive range of attachments and tools**
- **Simple operation**

Synthes Electric Pen Drive System

SYNTHESS Instruments and implants approved by the AO Foundation

Power Tools
**Features**
The Electric Pen Drive System is a light, high-speed system that provides the surgeon with the highest level of control during general orthopaedic trauma, foot, hand, maxillofacial, neurosurgical, oral, otolaryngological, reconstructive, and spine surgery. With a wide range of attachments and the latest in torque control and irrigation technology, the Electric Pen Drive sets a new standard in high-speed surgical instrumentation.

**Range of applications**

- Orthopaedic trauma
- Spine surgery
- Maxillofacial surgery
- Hand surgery
- Foot surgery
- Neurosurgery
Indications and Warnings

Indications
The Synthes Electric Pen Drive (EPD) system is indicated for screw insertion, pin and wire placement, cutting of bone and metal, drilling, reaming, decorticating, shaping and smoothing of bones and teeth in a wide variety of surgical procedures, including but not limited to general orthopaedic trauma, foot, hand, maxillofacial, neurosurgical, oral, otolaryngological, reconstructive and spine surgery.

Warnings
To minimize the risk of overheating and to ensure optimal function of the attachments and cutting tools, Synthes recommends the use of the Synthes Maintenance Station or the Maintenance Spray after each use of the Electric Pen Drive. Improper use may cause the system to overheat and injure the patient or user. Refer to the Maintenance and Cleaning section of the manual for more details.

Follow the intermittent duty cycle of 1 minute on, 3 minutes off, to minimize the risk of overheating and avoid injury to the patient.

Do not lay the drive unit on a magnetic mat to prevent possible activation of the drive unit.

To prevent injury, turn the mode switch on the drive unit to the LOCK position when inserting or removing attachments, burrs or saw blades.

Synthes burrs and saw blades are provided sterile for single use only. Reuse of disposables may increase the risk of infection and/or necrosis due to overheating.

Irrigation should be used with burrs and saw blades to avoid overheating. Synthes recommends using the irrigation system available on the Standard Console, or irrigate manually.

Do not use force or bend burrs or saw blades when burring or sawing. This may damage the instrument and cause injury to the patient or user.

Always use protective eyewear when burring or sawing.
Standard Console with Irrigation (05.001.000)

- Simple set-up in OR
- Easy operation
- Controls speed and irrigation
- Limits torque
- Quick cable connection

Slide control
For adjusting maximum speed for Drive Unit 2

Selection switch
For torque limiting

Slide control
For adjusting maximum speed for Drive Unit 1

ON/OFF LED

Connector
For Small Battery Drive Adaptor

Connector
For Drive Unit 1

Connector
For Foot Switch

Connector
For Drive Unit 2

Flow rate adjustment knob
For irrigation

Irrigation pump

Connection
For Drive Unit 2

Connection
For Drive Unit 1

Connection
For Foot Switch

Connection
For Small Battery Drive Adaptor
Basic Console (05.001.002)

Streamlined alternative with basic functions

- Connector For Drive Unit
- ON/OFF LED
- Connector For Foot Switch
- Connector For Small Battery Drive Adaptor
Electric Pen Drive

Lightweight drive unit provides the surgeon with the level of control required during delicate surgeries.

**Drive Unit (05.001.010)**
- Speed (without attachment): 0–60,000 rpm
- Weight: 183 g (6.2 oz)
- Clockwise and counterclockwise rotation

**Hand switch (05.001.012)**
- Removable
- Telescopic extension for better control of long attachments

**Foot switch, 1 pedal (05.001.016)**
- Large pedal surface
- Button for irrigation
- Connection for additional foot switch

**Foot switch, 2 pedals (05.001.017)**
- Controls forward and reverse
Electric Pen Drive

Electronic torque limiting function
Integrated torque limiting function facilitates screw insertion when using Synthes LCP technology.

Attachment insertion
Attachment release ring facilitates one-handed insertion/removal of attachment.

Cable insertion
Locking the mode switch prevents cable from detaching during use.

Simple irrigation setup
Built-in irrigation pump and easily attached irrigation nozzles allow irrigation with a variety of attachments.
Attachments

- A wide range of attachments to increase versatility
- Fast and easy exchange of attachments
- Irrigation nozzles available to cool cutting tools during drilling, burring and sawing

Drilling (1,800 rpm)
Drilling attachments with mini quick, J-latch, hex, or AO coupling

Oscillating drill attachment with mini quick coupling
For the protection of soft tissues

45° drill attachments, with mini quick, J-latch or AO coupling

90° drill attachment, short, with mini quick coupling

90° drill attachment, long, with mini quick coupling
Exceptionally small head designed for intraoral drilling
**Inserting Kirschner wires**

K-Wire attachment  
For 0.6 mm to 1.6 mm Kirschner wires  
Enables precise and simple insertion of wires

**Burring (60,000 rpm)**

Burr attachments, straight  
Three sizes (S, M, L)

Burr attachments, angled 20°  
Five sizes (S, M, L, XL, XXL)

**Performing craniotomies**

Craniotome Attachment  
Accepts Synthes Cranial Burrs and Synthes Dura Guards

**Dura Guards**  
Three sizes (S, M, L), for neurosurgery

**Hudson attachment**

Use with disposable perforators

- 05.001.177  Hudson Coupling Attachment
- 05.001.180  Irrigation Nozzle for 05.001.177
**Sawing**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sagittal saw</td>
<td>For Synthes sagittal saw blades for Electric Pen Drive</td>
</tr>
<tr>
<td>Reciprocating saw</td>
<td>For Synthes reciprocating saw blades for Electric Pen Drive</td>
</tr>
<tr>
<td>Oscillating saw</td>
<td>For Synthes crescentic and mandibular blades for Electric Pen Drive</td>
</tr>
</tbody>
</table>

**Inserting screws (400 rpm)**

Screw insertion attachments with AO, mini quick or hex coupling. Optimal speed for power driven insertion of screws.

**45° Drill Attachment**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.001.120</td>
<td>Drill Attachment, with Jacobs chuck</td>
</tr>
</tbody>
</table>

  - Speed: 0 to 1800 rpm

  - Function: 1.6 mm cannulation permits the use of this attachment for drilling and reaming over K-wires (e.g., for cannulated screws and for cup and cone technique)
## Electric Pen Drive Set (01.001.580)

### Graphic Case
- 690.580 Graphic Case for Electric Pen Drive (includes lid)

### Instruments
- 05.001.000 Standard Console with irrigation
- 05.001.010 Drive Unit, 60,000 rpm
- 05.001.012 Hand Switch
- 05.001.016 Foot Switch (1 pedal)
- 05.001.021 Cable, Drive Unit to Console, 4 m
- 05.001.022 Cable, Foot Switch to Console
- 05.001.027 Seal Nipple for Cables
- 05.001.028 Screw Insertion Attachment, AO coupling
- 05.001.029 Screw Insertion Attachment, hex coupling

#### Drill Attachments
- 05.001.030 Mini quick coupling
- 05.001.031 J-latch coupling
- 05.001.032 AO coupling
- 05.001.033 45° Oscillating Drill Attachment, mini quick coupling
- 05.001.034 Screw Insertion Attachment, mini quick coupling
- 05.001.035 90° Drill Attachment, short, mini quick coupling
- 05.001.036 90° Drill Attachment, long, mini quick coupling
- 05.001.037 K-Wire Attachment

#### Saw Attachments
- 05.001.038 Oscillating
- 05.001.039 Sagittal
- 05.001.040 Reciprocating

#### 45° Drill Attachments
- 05.001.042 Mini quick coupling
- 05.001.043 J-latch coupling
- 05.001.044 AO coupling

---

Note: For additional information, please refer to package insert.
<table>
<thead>
<tr>
<th>Code</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.001.045</td>
<td>Burr Attachments Short</td>
</tr>
<tr>
<td>05.001.046</td>
<td>Burr Attachments Medium</td>
</tr>
<tr>
<td>05.001.047</td>
<td>Burr Attachments Long</td>
</tr>
<tr>
<td>05.001.048</td>
<td>Burr Attachments Short, angled</td>
</tr>
<tr>
<td>05.001.049</td>
<td>Burr Attachments Medium, angled</td>
</tr>
<tr>
<td>05.001.050</td>
<td>Burr Attachments Long, angled</td>
</tr>
<tr>
<td>05.001.051</td>
<td>Dura Guards Short</td>
</tr>
<tr>
<td>05.001.052</td>
<td>Dura Guards Medium</td>
</tr>
<tr>
<td>05.001.053</td>
<td>Dura Guards Long</td>
</tr>
<tr>
<td>05.001.059</td>
<td>Craniotome Attachment</td>
</tr>
<tr>
<td>05.001.066</td>
<td>Irrigation Nozzles Short</td>
</tr>
<tr>
<td>05.001.067</td>
<td>Irrigation Nozzles Medium</td>
</tr>
<tr>
<td>05.001.068</td>
<td>Irrigation Nozzles Long</td>
</tr>
<tr>
<td>05.001.070</td>
<td>Irrigation Nozzles For Sagittal Saw Attachment</td>
</tr>
<tr>
<td>05.001.071</td>
<td>Irrigation Nozzles For Reciprocating Saw Attachment</td>
</tr>
<tr>
<td>05.001.076</td>
<td>Irrigation Nozzles For Perforator 01.001.054</td>
</tr>
<tr>
<td>05.001.111</td>
<td>Irrigation Nozzles For Hex Drilling Attachment</td>
</tr>
<tr>
<td>05.001.074</td>
<td>Handhold for Tool Change for Attachments</td>
</tr>
<tr>
<td>05.001.099</td>
<td>Maintenance Station, for Electric Pen Drive</td>
</tr>
<tr>
<td>05.001.110</td>
<td>Drill Attachment, hex coupling</td>
</tr>
<tr>
<td>05.001.120</td>
<td>Drill Attachment, with Jacob’s chuck</td>
</tr>
<tr>
<td>05.001.121</td>
<td>Guide for K-wires for Oscillating Saw Attachment</td>
</tr>
<tr>
<td>05.001.104</td>
<td>Pneumatic Connections</td>
</tr>
<tr>
<td>05.001.105</td>
<td>Pneumatic Connections for Maintenance Station (05.001.099)</td>
</tr>
<tr>
<td>05.001.066</td>
<td>Pneumatic Connections for Hex Drilling Attachment</td>
</tr>
<tr>
<td>05.001.104</td>
<td>DISS coupling</td>
</tr>
<tr>
<td>05.001.105</td>
<td>Schrader coupling</td>
</tr>
</tbody>
</table>
Electric Pen Drive Hand and Foot Set (01.001.581)

Graphic Case
690.580 Graphic Case for Electric Pen Drive

Instruments
05.001.000 Standard Console with irrigation
05.001.010 Drive Unit, 60,000 rpm
05.001.012 Hand Switch
05.001.016 Foot Switch (1 pedal)
05.001.021 Cable, Drive Unit to Console, 4 m
05.001.022 Cable Foot Switch to Console
05.001.027 Seal Nipple for Cables
05.001.028 Screw Insertion Attachment, AO coupling

Drill Attachments
05.001.030 Mini quick coupling
05.001.031 J-latch coupling
05.001.032 AO coupling
05.001.034 Screw Insertion Attachment, mini quick coupling
05.001.037 K-Wire Attachment for Electric Pen Drive

Saw Attachments
05.001.038 Oscillating
05.001.039 Sagittal
05.001.040 Reciprocating

Burr Attachments
05.001.045 Short
05.001.046 Medium
05.001.074 Handhold for Tool Change for Attachments
05.001.099 Maintenance Station, for Electric Pen Drive
Also Available

<table>
<thead>
<tr>
<th>Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.001.002 Basic Console</td>
</tr>
<tr>
<td>05.001.020 Cable, Drive Unit to Console, 2 m</td>
</tr>
<tr>
<td>05.001.025 Cable, Drive Unit to Console, 3 m</td>
</tr>
<tr>
<td>05.001.026 Cable, Foot Switch to Foot Switch, 2 m</td>
</tr>
<tr>
<td>05.001.055 Burr Attachment, extra extra long (or XXL), angled</td>
</tr>
<tr>
<td>05.001.060 0.4 Nm Torque Calibration Unit</td>
</tr>
<tr>
<td>05.001.061 0.8 Nm Torque Calibration Unit</td>
</tr>
<tr>
<td>05.001.063 Burr Attachment, extra long (or XL), angled</td>
</tr>
<tr>
<td>05.001.075 Cleaning Brush for K-wire Attachments</td>
</tr>
<tr>
<td>05.001.094 Maintenance Kit for Electric Pen Drive</td>
</tr>
<tr>
<td>05.001.095 Oil, 50 ml, for Electric Pen Drive</td>
</tr>
<tr>
<td>05.001.098 Maintenance Spray, for Electric Pen Drive</td>
</tr>
<tr>
<td>05.001.100 Cart for Electric Pen Drive</td>
</tr>
<tr>
<td>05.001.101 Adaptor for Maintenance Spray, for Drive Unit</td>
</tr>
<tr>
<td>05.001.102 Adaptor for Maintenance Spray, for Attachments</td>
</tr>
<tr>
<td>05.001.108 Light Adaptor for Small Battery Drive</td>
</tr>
<tr>
<td>05.001.177 Perforator with Hudson Coupling for Pen Drive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Irrigation Nozzles</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.001.065 XL (or Extra Long)</td>
</tr>
<tr>
<td>05.001.122 XXL (or Extra Extra Long)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Irrigation Tubing</th>
</tr>
</thead>
<tbody>
<tr>
<td>05.001.069.01S Irrigation Tubing Set, single pack, sterile</td>
</tr>
<tr>
<td>05.001.069.05S Irrigation Tubing Set, 5 pack, sterile</td>
</tr>
</tbody>
</table>
Also Available

**Graphic Case**
The Graphic Case and trays provide organized storage and serve as a sterilization container for the system. The case and trays also serve as a stand for the attachments in the sterile field.

- **Replacement Accessories**
  - 690.581 Lid for Electric Pen Drive Graphic Case
  - 690.582 Attachment Rack for Electric Pen Drive Graphic Case
  - 690.583 Insert Tray for 60,000 rpm Drive Unit, for Electric Pen Drive Graphic Case
  - 68.000.007 Support for Cutting Tools

- **Modular Cases**
  - 690.596 Single Level, with lid
  - 690.597 Two level, with lid
  - 690.586 Three level, with lid
  - **Insert Trays**
    - 690.594 Insert Tray for 90,000 rpm Drive Unit
    - 690.587 Insert Tray for 60,000 rpm Drive Unit
    - 690.588 Attachment Tray Assembly
  - **Module Inserts and Dividers**
    - 690.578 Module Insert, 4 compartments, with 4 dividers and screws
    - 690.579 Module Insert, 2 compartments, with 4 dividers and screws
    - 690.578.04 Divider Kit
  - 306.763 Label Sheet for Electric Pen Drive Modular Graphic Case
  - 690.589 Replacement Lid for Electric Pen Drive Modular Graphic Case
Extended Warranty and Service Programs

W1.01.001.581 One-year Extended Warranty and Annual Service Program for Electric Pen Drive Set, Trauma (for 01.001.580 and 01.001.581)

W3.01.001.581 Three-year Extended Warranty and Annual Service Program for Electric Pen Drive Set, Trauma (for 01.001.580 and 01.001.581)