Toll Free: 1-888-839-2366
Email: sales@customcontrolcables.com

Custom Control Cables is a division of
The A. F. Davidson Corporation
1410 East Tunnel Blvd.
Houma, LA 70363

www.cccables.com
Features & Construction

Core Constructions
High Performance (HP) 1 x 7 coated core is available in 3, 4 and 6 Series cables. HP Core uses a proprietary coating over 1 x 7 wire rope. This construction offers improved flexibility and higher push loads than armor core construction. Solid stainless steel cores are available in 3 Series push-pull, universal, positive lock and PTO cables. Tension cables use a 1 x 19 HP coated core, while 8 Series push-pull remains armor core.

Stranded Conduit
Multiple oil tempered spring wires are placed in a long lay pattern to protect the liner and inner core, maintain flexibility and withstand extreme compressive and tensile loads. This long lay construction results in minimal deflections during cable operation, assuring precise controlling action to the operator.

Conduit Jacket
Heavy duty, thick-walled polymer jackets are extruded onto the stranded liner for maximum cable strength. Standard HP cable material is polymer molded to a dark maroon color. HEFT 2 jacket, used in high temperature applications, is a nylon based material molded to a satin black color.

End Fittings
Corrosion-resistant materials are used throughout to provide maximum life. Standard 3, 4 and 6 Series rods and sleeves are 300 series stainless steel, while hubs are either stainless or aluminum. The 8 Series rods are stainless steel. Sleeves and hubs are aluminum with stainless steel options available for both.

Seals & Boots
High Performance seals are now standard! Durable custom compounded seals are used to prevent moisture and contaminants from entering the cable. The new High Performance seals outperform all previous seals and are now standard on all cables. The HP seals operate in all temperature extremes, while offering improved performance and efficiency. Tension cables use a durable tear-resistant silicone boot, designed for high cycle use and high temperature.

Rod & Sleeve Bearing
An exclusive polymer rod and sleeve bearing is used to improve efficiency, sealing and cable life by preventing metal-to-metal contact between the rod and sleeve. They also accurately align the rod with the seal to further ensure superior sealing and a longer cable life.

Specifications subject to change without notice

Specifications
Routing/Measuring
Measure the cable along the path it will take from the points where the cable hubs will be anchored. Follow the actual cable path as closely as possible, allowing for the largest practical bend radii.

Installation Notes: Control & Work End
Where a cable is to be connected to objects requiring linear movement only (e.g. spool valves), maximum life and efficiency is achieved by accurately aligning, in both planes, the cable hubs and the controlled object. See illustration:

It is important to securely anchor the cable hubs. Looseness of the mounting bracket will be perceived as lost motion “sponginess” and will inhibit detent feel.

Also, clamping in the bend area may reduce bend radii under operating loads. Clamping at tangents to the bend is preferred.

For highest efficiency and long life in lever actuating operations, install the cable so that the highest loads are operated with tension (pulling), rather than compression (pushing).

Routing/Measuring
Measure the cable along the path it will take from the points where the cable hubs will be anchored. Follow the actual cable path as closely as possible, allowing for the largest practical bend radii.

Optimum Life Bend Radii

<table>
<thead>
<tr>
<th>Series</th>
<th>Operating Life Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3 inches*</td>
</tr>
<tr>
<td>4</td>
<td>5 inches</td>
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<tr>
<td>6</td>
<td>7 inches</td>
</tr>
<tr>
<td>8</td>
<td>10 inches</td>
</tr>
</tbody>
</table>

* HP Core. Solid Core has 6" Bend Radii

www.cccables.com
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Cable Types/Options/Part Number System
How to Order HP Cables: Part Number System

Standard/Imperial

Example of a common Push-Pull Cable part number.
A standard HP Cable with no cable head, 4 Series, 3 inch travel, bulkhead hub, clamp hub and 120 inches in length.

Control Head Options
00 None: Cable Without Head
73 Positive Lock Quick-Disconnect Head: 3” Travel
75 Positive Lock Quick-Disconnect Head: 5” Travel
90 Vernier Head: Small, Black, Quick-Disconnect
92 Vernier Head: Large, Black, Quick-Disconnect
94 Vernier Head: Large, Black with Red Button, Quick-Disconnect

Basic Cable Number
(Choose from this catalog)
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Metric

See Above

Length – mm

*"M" prefix designates metric threads on rods and length in mm

www.cccables.com
Push-Pull HP Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

3 SERIES

4 SERIES

6 SERIES

8 SERIES

www.cccables.com
### 3 SERIES

**HP Core or Solid Core**

#### 10-32 Thread

**6" Bend Radii (HP)**

<table>
<thead>
<tr>
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<th>Clamp End</th>
<th>Operating Load</th>
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<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
</tr>
<tr>
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<td>0.25(63.5)</td>
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<td>0.40(101.6)</td>
</tr>
<tr>
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<td>0.65(165.1)</td>
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</tr>
<tr>
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<td>1.00(254.0)</td>
<td>0.80(203.2)</td>
<td>1.00(254.0)</td>
</tr>
<tr>
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<td>1.25(317.5)</td>
<td>1.10(282.6)</td>
<td>1.25(317.5)</td>
</tr>
<tr>
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<td>1.50(381.0)</td>
<td>1.30(330.0)</td>
<td>1.50(381.0)</td>
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<tr>
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<td>1.75(444.5)</td>
<td>1.40(356.0)</td>
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**4 SERIES**

**HP Core**

#### 1/4-28 Thread

**5" Bend Radii**

<table>
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<th>Clamp End</th>
<th>Operating Load</th>
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<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
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<td>0.65(165.1)</td>
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<tr>
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<td>1.10(282.6)</td>
<td>1.25(317.5)</td>
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<td>1.50(381.0)</td>
<td>1.30(330.0)</td>
<td>1.50(381.0)</td>
</tr>
<tr>
<td>6.0</td>
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<td>1.75(444.5)</td>
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<td>1.75(444.5)</td>
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**6 SERIES**

**HP Core**

#### 5/16-24 Thread

**7" Bend Radii**

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<th>Clamp End</th>
<th>Operating Load</th>
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</thead>
<tbody>
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<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
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<td>0.95(241.3)</td>
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<td>0.80(203.2)</td>
<td>1.00(254.0)</td>
</tr>
<tr>
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<td>1.25(317.5)</td>
<td>1.10(282.6)</td>
<td>1.25(317.5)</td>
</tr>
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<td>5.0</td>
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<td>1.50(381.0)</td>
</tr>
<tr>
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<td>1.75(444.5)</td>
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**8 SERIES**

**Armor Core**

#### 3/8-24 Thread

**10" Bend Radii**

<table>
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<th>Clamp End</th>
<th>Operating Load</th>
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<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
<td>Inch/(mm)</td>
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<td>0.65(165.1)</td>
<td>0.95(241.3)</td>
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<tr>
<td>3.0</td>
<td>0.75(190.5)</td>
<td>1.00(254.0)</td>
<td>0.80(203.2)</td>
<td>1.00(254.0)</td>
</tr>
<tr>
<td>4.0</td>
<td>1.00(254.0)</td>
<td>1.25(317.5)</td>
<td>1.10(282.6)</td>
<td>1.25(317.5)</td>
</tr>
<tr>
<td>5.0</td>
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<td>1.50(381.0)</td>
<td>1.30(330.0)</td>
<td>1.50(381.0)</td>
</tr>
<tr>
<td>6.0</td>
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<td>1.75(444.5)</td>
<td>1.40(356.0)</td>
<td>1.75(444.5)</td>
</tr>
<tr>
<td>7.0</td>
<td>1.75(444.5)</td>
<td>2.00(508.0)</td>
<td>1.80(460.4)</td>
<td>2.00(508.0)</td>
</tr>
</tbody>
</table>

---

**Cable Type**: 1 Stainless Steel Rods & HP Rod Seal (Standard) 2 All Stainless Steel Fittings 3 HEFT 2 (High Performance & High Temperature) 4 HEFT 2 and All Stainless Steel Fittings

---

**Metric – see pg. 2**

---

**www.cccables.com**
Universal – Utility Cables

Choice of core type:

- **HP Core – Polymer coated 1 x 7**
- **Solid .075 stainless steel core**
- Order handle/knob separately
- Nonmetallic liners

Indicate desired knob or handle on order. See page 6.

### Specifications

<table>
<thead>
<tr>
<th>Travel Inch/(mm)</th>
<th>DIM &quot;AA&quot; Inch/(mm)</th>
<th>DIM &quot;BB&quot; Inch/(mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0 (76.2)</td>
<td>4.0 (101.6)</td>
<td>5.0 (127.0)</td>
</tr>
<tr>
<td>5.0 (127.0)</td>
<td>6.5 (165.1)</td>
<td>8.0 (203.2)</td>
</tr>
</tbody>
</table>

### Cable Only

Building a Part Number

- **Cable Travel:** 3.5
- **Conduit Size:**
  - 0 = .31 dia. std.
  - 2 = .26 dia.
  (Available with cable type 0, solid core only)
- **Conduit Fitting Type:**
  - Plain - 0
  - Bulkhead - 2
  - Clamp - 3
  - Shoulder - 5
- **Cable Type:**
  - 0 Solid Core (3 Series Only) .075 dia.
  - 1 High Performance (Standard)
  - 3 HEFT 2 (High Performance & High Temperature)

www.cccables.com
T-Handles

Tough Nylon Material

Legend Identification
01 Plain
02 Stop
03 Shut-Off
04 Throttle
05 Choke
06 PTO
07 Emergency Stop
08 Engine Stop
09 (Lock)
10 Disconnect

Note: 01 Plain T-handle is a stock item. Other T-handles may have minimum order quantities and special order long lead time.

Note: To order Positive Lock Spare Handle 49005-1094 w/set screw use part #30073.

Rugged Phenolic Material

T-Handle/Knob Only
Building a Part Number

Base Part Number

Legend Identification
01 Plain
02 Stop
03 Shut-Off
04 Throttle
05 Choke
06 PTO
07 Emergency Stop
08 Engine Stop
09 (Lock)
10 Disconnect

Note: 01 Plain T-handle is a stock item. Other T-handles may have minimum order quantities and special order long lead time.

Note: To order Positive Lock Spare Handle 49005-1094 w/set screw use part #30073.

www.cccables.com
Indicate desired knob or handle on order. See page 6.
• Heavy Duty: 3, 4 & 6 Series threaded end rods
• Applications: throttle, choke, engine stop, fuel shut-off, latches
• Temperature Range: 
  -65 to +225°F / -54 to +107°C Std.
  -65 to +300°F / -54 to +149°C HEFT 2
• Wide variety of Handles & Knobs

HEAVY DUTY 3 SERIES
Choice of Core Type
HP Core – polymer coated 1 x 7
Solid .075 stainless steel core
10-32 Threaded rod (output end)

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel Inch/(mm)</td>
</tr>
<tr>
<td>1.0 (25.4)</td>
</tr>
<tr>
<td>2.0 (50.8)</td>
</tr>
<tr>
<td>3.0 (76.2)</td>
</tr>
<tr>
<td>4.0 (101.6)</td>
</tr>
<tr>
<td>5.0 (127.0)</td>
</tr>
</tbody>
</table>

HEAVY DUTY 4 SERIES
HP Core
1/4" – 28 Threaded rod (output end)

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel Inch/(mm)</td>
</tr>
<tr>
<td>1.0 (25.4)</td>
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<tr>
<td>2.0 (50.8)</td>
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<tr>
<td>3.0 (76.2)</td>
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<tr>
<td>4.0 (101.6)</td>
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<tr>
<td>5.0 (127.0)</td>
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HEAVY DUTY 6 SERIES
HP Core
5/16" – 28 Threaded rod (output end)

<table>
<thead>
<tr>
<th>Specifications</th>
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<tbody>
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</tr>
<tr>
<td>1.0 (25.4)</td>
</tr>
<tr>
<td>2.0 (50.8)</td>
</tr>
<tr>
<td>3.0 (76.2)</td>
</tr>
<tr>
<td>4.0 (101.6)</td>
</tr>
<tr>
<td>5.0 (127.0)</td>
</tr>
</tbody>
</table>
Quick Disconnect HP Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

LIGHT DUTY 3 SERIES

Choice of core type:
HP Core – Polymer coated 1 x 7 Solid .075 stainless steel core
Choice of 4 cable ends
Exposed core

HEAVY DUTY 3 SERIES

Choice of core type:
HP Core – Polymer coated 1 x 7 Solid .075 stainless steel core
10-32 Threaded rod (output end)

HEAD OPTIONS
SEE ABOVE

4 SERIES

HP Core
1/4"-28 Threaded rod (output end)

HEAD OPTIONS
SEE ABOVE

www.cccables.com
• Light Duty: Exposed Solid Core or 1 x 7 HP Core  
  HP Core: Choose for best flexibility, lower backlash and higher  
  efficiency. Polymer coated 1 x 7 wire rope  
  Solid Core: .075 solid stainless steel core  
• Heavy Duty: 3 & 4 Series threaded end rods  
  
  - Temperature Range:  
    -65 to +225°F / –54 to +107°C Std.  
    -65 to +300°F / –54 to +149°C HEFT 2  
• Applications: Engine RPM, or where coarse or fine adjustments  
  are needed  

Quick Disconnect Cable Heads  
#73 Positive Lock Head: 3” Travel  
#75 Positive Lock Head: 5” Travel  
#90 Vernier: Small Knob  
#92 Vernier: Black Center Button  
#94 Vernier: Red Center Button  

To Order  
Vernier and Positive Lock cable control heads may be  
ordered as a complete assembly (head and cable attached)  
or separately. Order the desired control head using the two- 
digit number 90, 92, 94, 73 or 75. Order the cable using the  
five-digit number from “Building a Part Number.” To order  
a complete assembly, combine the control head number  
with the desired cable number. Example: if you desire  
control head #94 and cable #33092, then combine to make  
the assembly part number X94-33092-length.  

Load Rating: Maximum 20 lbs. is recommended.

### Specifications

<table>
<thead>
<tr>
<th>Travel</th>
<th>Bulkhead End</th>
<th>Clamp End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch/(mm)</td>
<td>DM “A” Inch/(mm)</td>
<td>DM “B” Inch/(mm)</td>
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<tr>
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Using #75 Head

Load Rating: Maximum 20 lbs. is recommended.

### Specifications

<table>
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<th>Clamp End</th>
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</thead>
<tbody>
<tr>
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<td>DM “A” Inch/(mm)</td>
<td>DM “B” Inch/(mm)</td>
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<td>(131.8)</td>
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<td></td>
<td>(181.1)</td>
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Using #75 Head

Load Rating: Maximum 20 lbs. is recommended.
### 3 SERIES

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<th>Bulkhead End</th>
<th>Clamp End</th>
<th>Operating Loads</th>
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<td>Dim &quot;B&quot; Inch/(mm)</td>
<td>Push Lbs./(N)</td>
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<td>7.44 (189.0)</td>
<td>6.75 (171.5)</td>
<td>0</td>
</tr>
<tr>
<td>4.0</td>
<td>8.94 (227.1)</td>
<td>8.25 (209.6)</td>
<td>0</td>
</tr>
<tr>
<td>5.0</td>
<td>10.44 (265.2)</td>
<td>9.75 (247.7)</td>
<td>0</td>
</tr>
</tbody>
</table>

## Cable Type:
- Temperature Range: 
  -65 to +225°F / -54 to +107°C Std.
  -65 to +300°F / -54 to +149°C HEFT 2

### 4 SERIES

<table>
<thead>
<tr>
<th>Travel</th>
<th>Bulkhead End</th>
<th>Clamp End</th>
<th>Operating Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch/(mm)</td>
<td>Dim &quot;A&quot; Inch/(mm)</td>
<td>Dim &quot;B&quot; Inch/(mm)</td>
<td>Push Lbs./(N)</td>
</tr>
<tr>
<td>1.0</td>
<td>4.69 (119.1)</td>
<td>4.06 (103.1)</td>
<td>0</td>
</tr>
<tr>
<td>2.0</td>
<td>6.19 (157.2)</td>
<td>5.56 (141.2)</td>
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</tr>
<tr>
<td>3.0</td>
<td>7.69 (195.3)</td>
<td>7.06 (179.3)</td>
<td>0</td>
</tr>
<tr>
<td>4.0</td>
<td>9.19 (233.4)</td>
<td>8.56 (217.4)</td>
<td>0</td>
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<tr>
<td>5.0</td>
<td>10.69 (271.5)</td>
<td>10.06 (255.5)</td>
<td>0</td>
</tr>
</tbody>
</table>

## Cable Type:
- Temperature Range: 
  -65 to +225°F / -54 to +107°C Std.
  -65 to +300°F / -54 to +149°C HEFT 2

### 6 SERIES

<table>
<thead>
<tr>
<th>Travel</th>
<th>Bulkhead End</th>
<th>Clamp End</th>
<th>Operating Loads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inch/(mm)</td>
<td>Dim &quot;A&quot; Inch/(mm)</td>
<td>Dim &quot;B&quot; Inch/(mm)</td>
<td>Push Lbs./(N)</td>
</tr>
<tr>
<td>1.0</td>
<td>5.23 (130.3)</td>
<td>4.44 (112.8)</td>
<td>0</td>
</tr>
<tr>
<td>2.0</td>
<td>6.63 (168.4)</td>
<td>5.94 (150.9)</td>
<td>0</td>
</tr>
<tr>
<td>3.0</td>
<td>8.13 (206.5)</td>
<td>7.44 (189.0)</td>
<td>0</td>
</tr>
<tr>
<td>4.0</td>
<td>9.63 (244.8)</td>
<td>8.94 (227.1)</td>
<td>0</td>
</tr>
<tr>
<td>5.0</td>
<td>11.13 (282.7)</td>
<td>10.44 (265.2)</td>
<td>0</td>
</tr>
</tbody>
</table>

## Cable Type:
1 High Performance (Standard)
3 HEFT 2 (High Performance & High Temperature)
PTO Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

- Power take off operation
- .093 Solid Stainless Steel Core
- Full 5” travel
- 6” Bend radius

Power Take Off Cables
Red knob – standard
Temperature Range:
–65 to +225°F / –54 to +107°C Std.

RVO Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

- Remote valve control operation (Orscheln controls ONLY).
- HP Cable construction – same as 4 Series Push-Pull on pages 3–4.

Building a Part Number

Red knob – standard
Temperature Range:
–65 to +225°F / –54 to +107°C Std.

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

Connects to Orscheln Remote Valve Controls
55700
55709

Valve Connection Kit End

www.cccables.com
**RVC Cables**

- Remote Valve Control Cables
- Fits Competitor RVC Controls

**Can be custom assembled by local Orscheln® F.A.S.T.® distributors**

**Special Valve Control Cables**

- HD lever applications
- Remote valve dump body control use
- HP cable construction

**Can be custom assembled by local Orscheln® F.A.S.T.® distributors**

<table>
<thead>
<tr>
<th>Base Part Number</th>
<th>OAL inches</th>
<th>Valve End Connection</th>
<th>Control End Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 45630 0</td>
<td>0</td>
<td>11/16&quot; –16 thread connects to valve connection kit</td>
<td>5/8&quot;-18 bulkhead hub connects to an HD Lever</td>
</tr>
<tr>
<td>100 45639 0</td>
<td>0</td>
<td>11/16&quot; –16 thread connects to valve connection kit</td>
<td>Clamp hub connects to a 55781-2 dump body control shifter</td>
</tr>
<tr>
<td>100 45734 0</td>
<td>0</td>
<td>11/16&quot; –16 thread connects to valve connection kit</td>
<td>Clamp hub connects to a 3&quot; mounting dump body control shifter</td>
</tr>
<tr>
<td>100 45796 0</td>
<td>0</td>
<td>3/4&quot;-16 thread connects to valve connection kit</td>
<td>Clamp hub connects to a 55781-2 dump body control shifter</td>
</tr>
<tr>
<td>100 45791 0</td>
<td>0</td>
<td>3/4&quot;-16 thread connects to valve connection kit</td>
<td>5/8&quot;-18 bulkhead hub connects to an HD Lever</td>
</tr>
</tbody>
</table>

**www.cccables.com**

14 of 78
F.A.S.T.® Assemblers Exclusive Cables

Can be custom assembled by local Orscheln® F.A.S.T.® distributors

MIXER CABLES

1/4-28 UNF-2A
MID-TRAVEL
3” TRAVEL
P/N 100-45505-LENGTH

1/4-28 UNF-2A
MID-TRAVEL
4” TRAVEL
P/N 100-45506-LENGTH

1/4-28 UNF-2A
MID-TRAVEL
5” TRAVEL
P/N 100-45507-LENGTH

1/4-28 UNF-2A
MID-TRAVEL
6” TRAVEL
P/N 100-45508-LENGTH

HP RACE SHIFT CABLE – P/N 36101-LENGTH

7/16-20 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
3” TRAVEL
P/N 100-45505-LENGTH

M16 x 1.5
M6 x 1.0
Fitting rotates for easy installation

WALVOIL® REPLACEMENT CABLE – P/N 46041-LENGTH

1/4-28 UNF-2A
5/8-18 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
3” TRAVEL
P/N 100-45826-LENGTH

GM® REPLACEMENT CLUTCH CABLE – P/N 65604

1/4-28 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
3” TRAVEL
P/N 100-45826-LENGTH

1/4-28 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
4” TRAVEL
P/N 100-45827-LENGTH

1/4-28 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
5” TRAVEL
P/N 100-45828-LENGTH

1/4-28 UNF-2A
.093” DIA. SOLID STAINLESS STEEL
MID-TRAVEL
6” TRAVEL
P/N 100-45829-LENGTH

P/N 100-45018-LENGTH
5” TRAVEL
.16” DIA.
HP CORE
MID-TRAVEL
8-0”

GM® REPLACEMENT CLUTCH CABLE – P/N 65604

2-1/4
2-1/2
40mm TRAVEL
LENGTH

“L”

“A”

M10 x 1.5

www.cccables.com
**Hardware**

### CLEVIS

**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>39003-1</td>
<td>10-32 UNF-2B</td>
<td>3/16&quot; (4.8mm)</td>
<td>7/32&quot; (5.6mm)</td>
<td>11/32&quot; (8.7mm)</td>
<td>1-9/16&quot; (39.7mm)</td>
</tr>
<tr>
<td><strong>&quot;</strong></td>
<td>5/16-24 UNF-2B</td>
<td>7/32&quot; (5.6mm)</td>
<td>1-7/16&quot; (36.5mm)</td>
<td>2-1/4&quot; (57.2mm)</td>
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### 4 SERIES

<table>
<thead>
<tr>
<th>Part #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>49003-1</td>
<td>1/4-28 UNF-2B</td>
<td>1/4&quot; (6.4mm)</td>
<td>9/32&quot; (7.1mm)</td>
<td>1-1/4&quot; (31.8mm)</td>
<td>2&quot; (50.8mm)</td>
</tr>
<tr>
<td>49044-1</td>
<td>1/4-28 UNF-2B</td>
<td>1/4&quot; (6.4mm)</td>
<td>9/32&quot; (7.1mm)</td>
<td>1-1/4&quot; (31.8mm)</td>
<td>2&quot; (50.8mm)</td>
</tr>
<tr>
<td>69003-3</td>
<td>1/4-28 UNF-2B</td>
<td>1/4&quot; (6.4mm)</td>
<td>9/32&quot; (7.1mm)</td>
<td>1-1/4&quot; (31.8mm)</td>
<td>2&quot; (50.8mm)</td>
</tr>
</tbody>
</table>

### 6 SERIES

<table>
<thead>
<tr>
<th>Part #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>49003-3</td>
<td>5/16-24 UNF-2B</td>
<td>7/16&quot; (11.1mm)</td>
<td>11/32&quot; (8.7mm)</td>
<td>1-7/16&quot; (36.5mm)</td>
<td>2-1/4&quot; (57.2mm)</td>
</tr>
<tr>
<td>69003-1</td>
<td>1/4-28 UNF-2B</td>
<td>1/4&quot; (6.4mm)</td>
<td>9/32&quot; (7.1mm)</td>
<td>1-1/4&quot; (31.8mm)</td>
<td>2&quot; (50.8mm)</td>
</tr>
<tr>
<td>69034</td>
<td>5/16-24 UNF-2B</td>
<td>1/4&quot; (6.4mm)</td>
<td>9/32&quot; (7.1mm)</td>
<td>1-1/4&quot; (31.8mm)</td>
<td>2&quot; (50.8mm)</td>
</tr>
</tbody>
</table>

### 8 SERIES

<table>
<thead>
<tr>
<th>Part #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>39004-1</td>
<td>3/8-24 UNF-2B</td>
<td>7/16&quot; (11.1mm)</td>
<td>1/2&quot; (12.7mm)</td>
<td>1-7/8&quot; (47.6mm)</td>
<td>2-7/8&quot; (73.1mm)</td>
</tr>
<tr>
<td><strong>&quot;</strong></td>
<td>5/32-24 UNF-2B</td>
<td>1/2&quot; (12.7mm)</td>
<td>1/2&quot; (12.7mm)</td>
<td>1-7/8&quot; (47.6mm)</td>
<td>2-7/8&quot; (73.1mm)</td>
</tr>
</tbody>
</table>

### Special Series

<table>
<thead>
<tr>
<th>Part #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>49044-3</td>
<td>3/8-24 UNF-2B</td>
<td>1/2&quot; (12.7mm)</td>
<td>1/2&quot; (12.7mm)</td>
<td>1-7/8&quot; (47.6mm)</td>
<td>2-7/8&quot; (73.1mm)</td>
</tr>
</tbody>
</table>

* Consult factory for leadtime and availability.

**Note:** The 39003-1 clevis is made of polymer and is not identical to the illustration shown above.

### BALL JOINT

**TYPE A**

### CONDUIT CLIP

**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>39001-1</td>
<td>B</td>
<td>7/64&quot; (2.8mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/32&quot; (4.0mm)</td>
<td>5/16&quot; (7.9mm)</td>
<td>9/16&quot; (14.3mm)</td>
</tr>
<tr>
<td>39011-2</td>
<td>B</td>
<td>7/64&quot; (2.8mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/32&quot; (4.0mm)</td>
<td>5/16&quot; (7.9mm)</td>
<td>9/16&quot; (14.3mm)</td>
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</tbody>
</table>

### PIVOT

**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>39004-1</td>
<td>Stainless</td>
<td>9/32&quot; (7.5mm)</td>
<td>3/8&quot; (9.5mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/8&quot; (15.9mm)</td>
<td>1-5/16&quot; (33.3mm)</td>
</tr>
<tr>
<td>39004-2</td>
<td>Plated Steel</td>
<td>9/32&quot; (7.5mm)</td>
<td>3/8&quot; (9.5mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/8&quot; (15.9mm)</td>
<td>1-5/16&quot; (33.3mm)</td>
</tr>
</tbody>
</table>

* Consult factory for leadtime and availability.

---

**CLIP BRACKET**

**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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<tbody>
<tr>
<td>50067-1</td>
<td>A</td>
<td>1-4/8 UNF-2B</td>
<td>5/16&quot; (7.9mm)</td>
<td>2&quot; (50.8mm)</td>
<td>2&quot; (50.8mm)</td>
<td>7/16&quot; (11.9mm)</td>
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</tbody>
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**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td>30121</td>
<td>B</td>
<td>9/32&quot; (7.5mm)</td>
<td>3/8&quot; (9.5mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/8&quot; (15.9mm)</td>
<td>1-7/32&quot; (20.9mm)</td>
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</tbody>
</table>

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**"A" THD.**

<table>
<thead>
<tr>
<th>Part #</th>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
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</thead>
<tbody>
<tr>
<td>39004-1</td>
<td>Stainless</td>
<td>9/32&quot; (7.5mm)</td>
<td>3/8&quot; (9.5mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/8&quot; (15.9mm)</td>
<td>1-5/16&quot; (33.3mm)</td>
</tr>
<tr>
<td>39004-2</td>
<td>Plated Steel</td>
<td>9/32&quot; (7.5mm)</td>
<td>3/8&quot; (9.5mm)</td>
<td>1/4&quot; (6.4mm)</td>
<td>5/8&quot; (15.9mm)</td>
<td>1-5/16&quot; (33.3mm)</td>
</tr>
</tbody>
</table>
**STOP COLLAR**

**TERMINAL EYES**

**FIELD CLAMP**

**SLIP LINK KIT**

**SHIM**

**FIELD HUB KITS FOR STANDARD FELSTED® BRAND 3 SERIES CABLES**

(Solid or HP Core) • (Conduit Outside Diameter of .31’’)

**SLIP LINK KIT**

- **Kit #39067-2**
- **Kit #39067-3**
- **Kit #39067-4**

**SHIFT CABLE CONNECTION KIT**

---

[www.cccables.com](http://www.cccables.com)
The Global Leaders
in motion control systems.

This catalog includes Felsted’s engine, valve, and pump controls. For more than 25 years, Felsted has produced hand and foot controls for the on-highway and off-highway heavy-duty markets. Most controls in this catalog continue to utilize mechanical control cables which we produce for both OEM and aftermarket needs. In addition, we have designed foot pedals and hand vernier controls for the new generation of electronic controlled diesel engines.

**Engine Controls**
Felsted designs and manufactures floor throttle pedals for both mechanical and electronic governed engines. Our rugged steel mechanical pedal on pages 5-6 is used on various on and off highway equipment. (See Felsted HP Cable catalog for throttle and vernier control cables.) For the new electronic controlled diesels, see page 2 for our standard floor pedals. Suspended style throttle pedals are unique to each OEM application.

Please consult the factory for the latest specifications.

New generation vehicles are demanding more reliable electronics, lightweight materials, and corrosion resistant materials. Long life sensors and molded polymers are used to provide lightweight and durable performance.

**Valve and pump controls**
Hand levers to remotely operate spool valves are on page 7, and companion Heavy-Duty levers are on pages 9-10. These cable controlled levers provide rugged operation and flexibility for remote location.

For PTO and hoist controls on dump trucks, see pages 11-12 and 13-14. Felsted offers both “T” handle and side push button styles.

---

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- Floor Pedal for Electronic Engines .......................................................... 2
- EV2 Vernier Hand Control for Electronic Engines ....................................... 3
- Friction Throttle Control ........................................................................ 4
- Mechanical Floor Accelerator Pedal ......................................................... 5-6
- RVO Remote Valve Controls ................................................................... 7
- Valve Connection Kits ............................................................................ 8
- Heavy-Duty Levers ................................................................................. 9-10
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- Dump Body Controls — T-Handle ......................................................... 13-14

Specifications in this catalog are subject to change without notice.

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The foot pedal delivers a precision signal that interacts with the engine’s electronic fuel management systems. Polymer components create a lightweight pedal, as much as half the weight of current pedals in the marketplace. This fast-reacting pedal provides smooth driver operation, and features a durable, longer-life potentiometer. Quality testing ensures reliability and durability.

### Specifications for Electronic Foot Pedal

#### Functional

Actuation Force applied perpendicular to the treadle surface and at a point 7.4 inches (188 mm) from centerline of the pivot axis.

- Initial Movement: > 2 lbs. (9 N)
- Full Throttle: < 11.5 lbs. (51 N)
- Rotational Angle: 16-20°

#### Weight

- Weight of Pedal: 1.9 lbs. (.86 Kg)

#### Durability

- Full Stroke Cycles: 10 Million
- Dither Cycles ±1
- Degree, Mid Range: 80 Million

#### Electrical Specifications

- Potentiometer: 2.5 k ±15% Ohm’s
- Maximum Voltage: 13.5 Vdc
- Power Rating: 0.15 W @ 85° C
- Max continuous current: 20 mA
- *Minimum output: 0.5% ±0.5% of ref. V.
- *Maximum output: 93% ±2% of ref. V.

*Minimum and Maximum outputs controlled by mechanical assembly of pedal.

### Electronic Pedal Product Numbers

<table>
<thead>
<tr>
<th>Electronic Pedal Product Numbers</th>
<th>Standard Models</th>
<th>35° Pedal Angle</th>
<th>48° Pedal Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caterpillar</td>
<td>EFP107-00</td>
<td>EFP102-00</td>
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</tr>
<tr>
<td>Cummins</td>
<td>EFP108-00</td>
<td>EFP103-00</td>
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</tr>
<tr>
<td>Detroit Diesel</td>
<td>EFP109-00</td>
<td>EFP104-00</td>
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</tr>
<tr>
<td>Mack</td>
<td>VMAC</td>
<td>EFP110-00</td>
<td>EFP105-00</td>
</tr>
<tr>
<td>Navistar</td>
<td>EFP111-00</td>
<td>EFP106-00</td>
<td></td>
</tr>
</tbody>
</table>

www.cccables.com
**EV2 (Vernier Control for Electronic Engines)**

The Felsted® Electronic Vernier (EV2), has been designed to provide precise, variable engine speed adjustment on electronically controlled stationary engines, or from a remote operating position on mobile equipment. We have engineered the EV2 to allow capability with most electronically-controlled diesel engines.

The EV2 is easy to operate, even with gloves on. The **large (2-1/4”) diameter**, easily identifiable knob provides continuous engine speed regulation **from idle to wide open throttle in seven (7) full turns**, providing fine engine speed adjustment. To prevent accidental overrevving, the EV2 cannot be pulled to the wide open throttle position - it must be turned. It does, however, offer a **quick shut-down** feature activated by pushing in the knob. The EV2 also offers an adjustable friction collar to prevent accidental changes in engine speed. When a change in engine speed is desired, the friction collar may be loosened.

The Felsted EV2 is easily installed in a very limited amount of space. The EV2 requires a .78” diameter drilled hole, and only 4.5” clearance behind the dash panel. The EV2 is **pre-set at the factory**, with no field adjustment necessary. The potentiometer unit is sealed for protection against moisture and contaminants.

<table>
<thead>
<tr>
<th><strong>EV2 Product Numbers</strong></th>
<th><strong>Standard Models</strong>*</th>
<th><strong>Part Number</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cummins</td>
<td>‘B’ and ‘C’ Series (no IVS)</td>
<td>EVR001</td>
</tr>
<tr>
<td>Detroit Diesel</td>
<td>DDEC I, II, III</td>
<td>55790-1</td>
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<tr>
<td>Mack</td>
<td>VMAC</td>
<td>EVR001</td>
</tr>
<tr>
<td>Navistar</td>
<td>T444E, DT446E, 530E</td>
<td>EVR001</td>
</tr>
</tbody>
</table>

*Consult factory for availability on other models.

**Chassis Harness / Connector**

Requires customer supplied items as follows: Packard Electric Connector - Three Way Weatherpack

<table>
<thead>
<tr>
<th><strong>EV2 Product Numbers</strong></th>
<th><strong>Packard P/N</strong></th>
<th><strong>Cable Diameter</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 pc. Tower</td>
<td>12015793</td>
<td></td>
</tr>
<tr>
<td>3 pc. Female Terminal (typical)</td>
<td>12010182</td>
<td>#14 - 16 gauge</td>
</tr>
<tr>
<td>3 pc. Seal (typical)</td>
<td>12015899</td>
<td>.06” - .08”</td>
</tr>
</tbody>
</table>

VMAC is a registered trademark of Mack Truck. • DDEC is a registered trademark of Detroit Diesel Corporation.

[www.cccables.com](http://www.cccables.com)
**Throttle Control with Friction Pad**

Tough, demanding conditions on mining and construction equipment, drilling rigs, and on and off-highway equipment need a throttle control that is adjustable and stays put. The friction pad was formulated from a special material that gives the control the positive feel and settings needed, especially in an environment with vibration and contaminants. This hand operated control connects to a push-pull cable that is attached to the engine governor, or other apparatus needing variable control.

Follow the charts below to construct the ASSEMBLY PART NUMBER for your specific throttle control. First, choose the type of throttle control you need (first 5 digits). Second, choose appropriate options from each chart and place the option # into the appropriate coded boxes. When combined, you will have your ASSEMBLY PART NUMBER.

---

**How to Order the Throttle Control**

<table>
<thead>
<tr>
<th>Handle Type</th>
<th>Position Indicator</th>
<th>Assembly Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>T-HANDLE</td>
<td>F - N - R</td>
<td>55943</td>
</tr>
<tr>
<td>FAST - SLOW</td>
<td>55801</td>
<td></td>
</tr>
<tr>
<td>TOP PUSH BUTTON</td>
<td>FAST - SLOW</td>
<td>55800</td>
</tr>
</tbody>
</table>

**CABLE HANGER BRACKET POSITIONS**

<table>
<thead>
<tr>
<th>Chart 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAST</td>
</tr>
<tr>
<td>FAST</td>
</tr>
<tr>
<td>FAST</td>
</tr>
<tr>
<td>FAST</td>
</tr>
</tbody>
</table>

- **OPTION #1** Control PULLS cable into FAST position
- **OPTION #3** Control PULLS cable into FAST position
- **OPTION #5** Control PUSHES cable into FAST position
- **OPTION #7** Control PUSHES cable into FAST position

**CONTROL MOUNT/FAST POSITIONS**

<table>
<thead>
<tr>
<th>Chart 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Front</td>
</tr>
<tr>
<td>“Fast” or “F” to front</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPTION #</th>
<th>LEFT hand mount</th>
<th>RIGHT hand mount</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CABLE SERIES OPTIONS**

<table>
<thead>
<tr>
<th>Chart 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Series 1/4-28 (.25-28) Thread</td>
</tr>
<tr>
<td>6 Series 5/16-24 (.31-24) Thread</td>
</tr>
</tbody>
</table>

- **4** for 4 Series 1/4-28 (.25-28) Thread
- **6** for 6 Series 5/16-24 (.31-24) Thread

**CABLE TRAVEL OPTIONS**

<table>
<thead>
<tr>
<th>Chart 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; Travel</td>
</tr>
<tr>
<td>3&quot; Travel</td>
</tr>
</tbody>
</table>

- **2** for 2” Travel
- **3** for 3” Travel

**GATE CONFIGURATION OPTIONS**

<table>
<thead>
<tr>
<th>Chart 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Gate</td>
</tr>
<tr>
<td>Control Lock in Detent</td>
</tr>
</tbody>
</table>

- **0** for No Gate
- **1** for Control Lock in Detent

**ILLUMINATION**

<table>
<thead>
<tr>
<th>Chart 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>With Light</td>
</tr>
</tbody>
</table>

- **1** for With Light

---

55801 - OPTIONS
Locks in “slow” position

55943 - OPTIONS
Locks in “N” position

www.cccables.com
Felsted Foot Pedal - Mechanical

The Felsted foot pedal is the heavy-duty choice for trucks, buses, agricultural equipment, construction equipment, and virtually all other applications that call for a foot operated control. That's because its rugged steel stamping construction offers far greater rigidity, durability, and reliability than aluminum die castings. And because it's designed with oil impregnated bronze bearings that won't wear out like nylon bearings. For ease of installation, it bolts to the floor with three point mounting and incorporates a unique keyhole mount for the cable hub that requires only a single fastener. For flexibility, it has 360° adjustability for cable entry, is available with either two-inch or three-inch travel, and either three or four series cable. And for even greater flexibility, you can connect a modulator to the pedal, eliminating the need for cumbersome linkages to the engine governor. Other features include a self-cleaning boot that deflects dirt and debris, a double torsion pedal return spring, adjustable pedal height, and a factory assembled heel rest. When used with Felsted cables and modulators, the Felsted Foot Pedal gives you a complete system you can rely on.

Specifications for Foot Pedal

<table>
<thead>
<tr>
<th>Specifications</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horizontal Cable Entry</td>
<td>360° Adjustable</td>
</tr>
<tr>
<td>Vertical Cable Entry</td>
<td>0° - 30° Adjustable</td>
</tr>
<tr>
<td>Pedal Angle</td>
<td>30° - 53° At Idle</td>
</tr>
<tr>
<td>Cable Travel</td>
<td>2&quot; - 3&quot; Travel Available</td>
</tr>
<tr>
<td>Cable Size</td>
<td>3 or 4 Series Option</td>
</tr>
<tr>
<td>Construction</td>
<td>Steel Stamping - Plated for Corrosion Resistance</td>
</tr>
<tr>
<td>Bearings</td>
<td>Oil impregnated Bronze Bearings</td>
</tr>
<tr>
<td>Upper Boot</td>
<td>Neoprene</td>
</tr>
<tr>
<td>Pedal Return Spring</td>
<td>Double Torsion</td>
</tr>
<tr>
<td>Pedal Stop</td>
<td>Adjustable, Enclosed for Protection</td>
</tr>
<tr>
<td>Floor Thickness</td>
<td>Up to .50&quot; Max.</td>
</tr>
<tr>
<td>Protrusion Underfloor</td>
<td>2&quot; Travel: 4 3/4&quot;</td>
</tr>
<tr>
<td></td>
<td>3&quot; Travel: 4 3/4&quot;</td>
</tr>
<tr>
<td>Main Linkage Bearings</td>
<td>Self Aligning</td>
</tr>
<tr>
<td>Cable Hub Connection</td>
<td>Keyhole Mounting Requires Single Fastener*</td>
</tr>
<tr>
<td>Pedal Load</td>
<td>Recommended Maximum Load: 25 lbs. Pedal Load at Installation Should Not Exceed 12 lbs. Recommended Maximum Load at Wide Open Throttle Stop: 100 lbs**</td>
</tr>
<tr>
<td>Mechanical Advantages</td>
<td>2&quot; Travel: 1.4</td>
</tr>
<tr>
<td></td>
<td>3&quot; Travel: 1.0</td>
</tr>
<tr>
<td>Modulator</td>
<td>Available With or Without Modulator Pivot (Special Modulator Required - See Back Page)</td>
</tr>
<tr>
<td>Heel Rest</td>
<td>With or Without Heel Rest, Can Be Field Installed</td>
</tr>
</tbody>
</table>

Single Fastener Keyhold Mounting System For Easy Installation (Note: Felsted cables and pedal modulators must be used to engage keyhole mounting feature.)

Floor Cut Out Template for Felsted Mechanical Foot Pedal

All measurements in inches.

Specifications subject to change without notice.

*Felsted cables and modulators must be used to engage keyhole mounting system.

**Based on load applied to pedal surface 6 inches from pedal pivot and 90° to surface.
How to Order a Foot Pedal - Mechanical

Ordering the foot pedal that meets your needs is not difficult. Simply follow the instructions below to create the assembly part number. The first five numbers will be followed by three numbers that are chosen from the charts below.

1. Choose either a 2” or 3” Travel. This number is your BASIC NUMBER.

2. Choose the appropriate options from charts 1, 2, and 3.

3. Place each option number that you have chosen into its corresponding colored box. These create your ASSEMBLY CODE.

4. Combine all eight numbers to create the ASSEMBLY PART NUMBER. For example, the final assembly part number could possibly be 95002-300. (2” travel, 3 series, no heel rest, no modulator)

---

**Assembly Part Number**

<table>
<thead>
<tr>
<th>2” TRAVEL</th>
<th>3” TRAVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>95002</td>
<td>95003</td>
</tr>
</tbody>
</table>

---

**Cable Hanger Kit**
99000-1 = 2” Travel
99000-2 = 3” Travel

Includes:
- Hanger Assembly
- Flange Nuts (2)

**Cable Attach Kit**
99001-1 = 3 Series
99001-2 = 4 Series

Includes:
- Lock Plate Assembly and Screw
- Pin and Hair Pin Cotter
- Clevis

**Upper Boot Kit**
99002-1

Includes:
- Upper Boot
- Pin and Hair Pin Cotter
- Jam Nut

**Heel Rest Kit**
99003-1

Includes:
- Heel Rest
- Self Tap Screws (2)

---

**Modulators for Foot Pedal**

**Modulators**
98000-Length = 2” Travel
98001-Length = 3” Travel

Allison Transmissions Only

* Felsted cables and modulators must be used to engage keyhole mounting system.

**Cables**

<table>
<thead>
<tr>
<th>Series</th>
<th>3 Series</th>
<th>4 Series</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#10-32UNF-2A</td>
<td>1/4-28UNF-2A</td>
</tr>
<tr>
<td>Length</td>
<td>352X3-Length = 2” Travel</td>
<td>452X3-Length = 2” Travel</td>
</tr>
<tr>
<td></td>
<td>353X3-Length = 3” Travel</td>
<td>453X3-Length = 3” Travel</td>
</tr>
</tbody>
</table>

Other configurations available. Consult Factory.

X = Specify 2 for bulkhead, 3 for clamp.

www.cccables.com
The Felsted remote valve operator (RVO) control system permits highly efficient remote cable operation of hydraulic spool valves. While the control head is in easy reach of the operator, the noise, heat, and inconvenience of high pressure hydraulic lines are removed from the cab area. In addition to economical installation, the Felsted system also allows greater flexibility when planning valve placement.

A remote valve control system consists of a control head, a cable, and a valve connection kit. Felsted systems are designed for ease of installation, operation, and maintenance in a wide variety of equipment in agriculture, construction, off-highway trucks, and industrial applications.

**Control Cables**
See Felsted Cable Catalog for more Information

100-45600 - Length
Input end connects to control head, output end connects to universal connection kit.

100-45622 - Length
Input end connects to control head, output end is a series 2” travel bulkhead type connection.

100-45623 - Length
Input end connects to control head, output end is a 4 series 2” travel clamp type connection

Rods, sleeves
Stainless steel

Temp. rating
-65°F to +225°F. (Hi-temp avail. to +300°F)

Bend Radii
5”

**Connection Kits**
See page 8 of this catalog.

**Specifications for Remote Valve Operator**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control Head</td>
<td>55700#, 55709# 90° Handle</td>
</tr>
<tr>
<td>Handle</td>
<td>Plated Steel</td>
</tr>
<tr>
<td>Boot</td>
<td>PVC Dip Molded</td>
</tr>
<tr>
<td>Housing</td>
<td>Die Cast Aluminum</td>
</tr>
<tr>
<td>Knob</td>
<td>Black Phenolic</td>
</tr>
<tr>
<td>Overall Length</td>
<td>16.4 Inches</td>
</tr>
<tr>
<td>Spring Action</td>
<td>Spring Centered 40°</td>
</tr>
<tr>
<td>Travel</td>
<td>1.75 Inches Max.</td>
</tr>
<tr>
<td>Stackable</td>
<td>Create Multiples, Combinations, Both</td>
</tr>
<tr>
<td></td>
<td>55700 and 55709</td>
</tr>
<tr>
<td></td>
<td>When Stacked, Cables</td>
</tr>
<tr>
<td></td>
<td>Can Be Serviced Without Complete Disassembly</td>
</tr>
</tbody>
</table>

www.cccables.com
Valve Connection Kits - RVO and Heavy-Duty Levers - 4 Series Only

Note: Requires special cable. Not for use with H.D. Levers with 3” travel.

<table>
<thead>
<tr>
<th>Valve</th>
<th>Valve Model</th>
<th>Felsted Kit Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>A 20 Rear Entry</td>
<td>59102</td>
</tr>
<tr>
<td>Intertech</td>
<td>A 35 Spring Return Rear Entry</td>
<td>59118</td>
</tr>
<tr>
<td></td>
<td>D 50</td>
<td>59120</td>
</tr>
<tr>
<td></td>
<td>A 35 Front Entry</td>
<td>59134</td>
</tr>
<tr>
<td></td>
<td>C 102, C 101 Pump, 1 1/2” Dia. Nose Only</td>
<td>59172</td>
</tr>
<tr>
<td></td>
<td>VA-20 Front Entry</td>
<td>59218</td>
</tr>
<tr>
<td>Cross</td>
<td>BA, BC, CA, CD</td>
<td>59104</td>
</tr>
<tr>
<td>Energy</td>
<td>CVP, CVS D, CVA-200</td>
<td>59100</td>
</tr>
<tr>
<td>Gresen</td>
<td>25P, CP, CS, V20, V42</td>
<td>59100</td>
</tr>
<tr>
<td></td>
<td>V-70</td>
<td>59109</td>
</tr>
<tr>
<td></td>
<td>V50</td>
<td>59383-1</td>
</tr>
<tr>
<td>Husco</td>
<td>5000</td>
<td>59119</td>
</tr>
<tr>
<td></td>
<td>6000</td>
<td>59103</td>
</tr>
<tr>
<td>Hydro-</td>
<td>HC-D2 Rear Entry</td>
<td>59127</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parker</td>
<td>VDP-12</td>
<td>59108</td>
</tr>
<tr>
<td>Prince</td>
<td>S100</td>
<td>59354-1</td>
</tr>
<tr>
<td>Racine</td>
<td>3/8</td>
<td>59103</td>
</tr>
<tr>
<td></td>
<td>1/2</td>
<td>59108</td>
</tr>
<tr>
<td>Rexroth</td>
<td>MP-18, 30-S2</td>
<td>59101</td>
</tr>
<tr>
<td>(Borgwarner)</td>
<td>MP-18</td>
<td>59178</td>
</tr>
</tbody>
</table>

For kits not listed, check with factory.

Cables to be used with connection kits
- Heavy-Duty Lever 2” TRVL 100-45630-Length
- Remote Valve Control 100-45600-Length

Cables not included, must order separate.

www.cccables.com
Felsted’s Heavy-Duty Levers are built especially for rugged, demanding applications in the construction, farm, and specialty truck business. In addition to the standard version, a push button version is also available which provides convenient push button operation and a choice of five gate configurations to offer a variety of design applications where the lever needs a detent locking mechanism.

The mechanical advantage of both levers is 5:1 with operating loads from 125 to 400 pounds dependent on cable series and travel. Superior corrosion resistance is provided by a handsome black matte finish Electrocoat Coating for the lever mechanism, which will meet 5% Salt-Spray, 336-500, with zinc plate for fasteners. Other advantages include a lightweight design and a pivot bushing.

**How to Order a Standard Non-Push Button Lever**

To build an Assembly Part Number, please refer to the option charts below, and place the option numbers into the corresponding color coded boxes. Please Note: Knob color option only exists as black, which is #1.

### KNOB COLOR OPTIONS

| Black Knob Color | 1 |

### CABLE SERIES OPTIONS

| 4 Series  | 4 |
| 6 Series  | 6 |

### TRAVEL DISTANCE

| 2 Inches | 2 |
| 3 Inches | 3 |

To build the Assembly Part Number, refer to the option charts and place the option numbers into the corresponding color coded boxes. Please Note: Knob color option only exists as black, which is #1.

**Assembly Part Number**

### Hollow Steel Handle

| 58000 |

### Solid Steel Handle

| 58100 |

www.cccables.com
## Cable Part Number

<table>
<thead>
<tr>
<th>Cable Part Number</th>
<th>Dim. “A”</th>
<th>Dim. “B”</th>
<th>Cable Series</th>
<th>Input Max. Load Lb.</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-4222-length</td>
<td>5 1/2”</td>
<td>2”</td>
<td>4</td>
<td>150</td>
</tr>
<tr>
<td>100-4223-length</td>
<td>5 1/2”</td>
<td>2”</td>
<td>4</td>
<td>150</td>
</tr>
<tr>
<td>100-4322-length</td>
<td>7”</td>
<td>3”</td>
<td>4</td>
<td>125</td>
</tr>
<tr>
<td>100-4323-length</td>
<td>7”</td>
<td>3”</td>
<td>4</td>
<td>125</td>
</tr>
<tr>
<td>100-6222-length</td>
<td>5 1/2”</td>
<td>2”</td>
<td>6</td>
<td>250</td>
</tr>
<tr>
<td>100-6223-length</td>
<td>5 1/2”</td>
<td>2”</td>
<td>6</td>
<td>250</td>
</tr>
<tr>
<td>100-6322-length</td>
<td>7”</td>
<td>3”</td>
<td>6</td>
<td>210</td>
</tr>
<tr>
<td>100-6323-length</td>
<td>7”</td>
<td>3”</td>
<td>6</td>
<td>210</td>
</tr>
</tbody>
</table>

Cables not included. All dimensions in inches. Mounting dimensions same for push button and standard levers.

### How to Order a Push Button Heavy-Duty Lever

**GATE CONFIGURATIONS**

- POSITION #1
- POSITION #2
- POSITION #3
- POSITION #4
- POSITION #5

**CABLE SERIES OPTIONS**

- 4 Series: [4]
- 6 Series: [6]

**TRAVEL DISTANCE**

- 2 Inches: [2]
- 3 Inches: [3]

Assembly Part Number:

- Push Button Style: 58001

---

www.cccables.com
NG Dump Body Control

The NG (New Generation) Dump Body Control is for operation of pumps, hydraulic spool valves, and PTO's.

Designed and manufactured with World Class techniques, this control combines rugged steel components, heat treated in critical areas, with a simple modular construction to produce a “New Generation” of mechanical control products. This new line of products combines the strength and reliability of our current mechanical controls with the latest in manufacturing technologies to produce a high value control system for our customers.

As an added feature for easy installation, we have incorporated a quick-connect cable mounting system into this control. Utilizing a clamp built into the cable mounting bracket, the assembler needs only a standard 1/4 x 1” bolt and locknut to attach the cable to the control. This allows faster assembly of the cable, while using common mounting hardware available anywhere.

Just like the T-Handle unit, this Dump Body Control features a positive locking detent system which minimizes the possibility of the control being unintentionally bumped or knocked out of detent. The Hoist Control locks in "N" (neutral) position and the PTO locks in "OUT" position. To release from detent, just push in on the side push button and move the lever to desired position. The illuminated position strip and lever indicator provide position range indication day and night.

Specifications for NG Dump Body Control

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cable Size Required</strong></td>
<td>4 Series, 3&quot; Travel Cable with Clamp Type Hub and 1/4-28 Rod Threads</td>
</tr>
<tr>
<td></td>
<td>(Cable #100-4323-Length for Bulkhead or #100-4333-Length for clamp mounting)</td>
</tr>
<tr>
<td></td>
<td>(Cable #100-45734-Length for Felsted Universal Connection Kits)</td>
</tr>
<tr>
<td><strong>Cable Travel Produced</strong></td>
<td>2 1/2&quot;</td>
</tr>
<tr>
<td><strong>Cable Bracket Angle</strong></td>
<td>90 Degrees for Tower Installation</td>
</tr>
<tr>
<td><strong>Cable Mounting</strong></td>
<td>Built-in Cable Clamp Requires a 1/4 x 1” Bolt w/ Locknut</td>
</tr>
<tr>
<td><strong>Control Construction</strong></td>
<td>Steel Chassis and Handle Assembly</td>
</tr>
<tr>
<td></td>
<td>Polymer Knob and Trim Covers</td>
</tr>
<tr>
<td><strong>Corrosion Protection</strong></td>
<td>Black E-coat for Handle</td>
</tr>
<tr>
<td></td>
<td>Zinc Plate for Other Metal Components</td>
</tr>
<tr>
<td><strong>Control Mounting</strong></td>
<td>Right Hand Mount for Tower Mounting Configuration</td>
</tr>
<tr>
<td><strong>Illumination</strong></td>
<td>28 VDC</td>
</tr>
<tr>
<td><strong>Handle Configuration</strong></td>
<td>Side Push Button Angled at 45 Degrees</td>
</tr>
<tr>
<td><strong>Hoist Operation</strong></td>
<td>Lever Locks in “N” Position</td>
</tr>
<tr>
<td></td>
<td>Pushing Lever to “DOWN” (Forward) Pushes Cable</td>
</tr>
<tr>
<td><strong>PTO Operation</strong></td>
<td>Lever Locks in “OUT” Position</td>
</tr>
<tr>
<td></td>
<td>Pushing Lever to “IN” (Forward) Pulls Cable</td>
</tr>
</tbody>
</table>

www.cccables.com
## NG Dump Body Control

### Part Numbers

<table>
<thead>
<tr>
<th>Dual Controls</th>
<th>Single Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>NG0003 NG PTO / Hoist Control</td>
<td>NG0001 NG Hoist Control</td>
</tr>
<tr>
<td>(PTO on left, hoist on right,</td>
<td>NG0001 NG PTO Control</td>
</tr>
<tr>
<td>as shown)</td>
<td></td>
</tr>
<tr>
<td>NG0004 NG Hoist / PTO Control</td>
<td>NG0005-1 Knob Service Kit</td>
</tr>
<tr>
<td>(Hoist on left, PTO on right)</td>
<td></td>
</tr>
</tbody>
</table>

### Hoist Control Notes
- Lever locks in the “N” position.
- Pushing lever to “DOWN” position pushes cable.

### PTO Control Notes
- Lever locks in the “OUT” position.
- Pushing lever to “1N” position pulls cable.
The Felsted T-Handle Dump Body Control is used to control the PTO and/or pump for dump body hoists. This control is standard as a dual unit (PTO and Hoist) or available as a single unit (PTO or Hoist), or a triple control unit (two Hoists and a PTO). Quad units are also available. Also available with the PTO control as a factory installed option, is a switch for a dash light, or secondary electrical function when PTO is engaged (“IN” position).

These controls feature a positive detent locking system which practically eliminates any possibility of the control being unintentionally bumped or knocked out of detent. The Hoist Control locks in “N” (neutral) position, and the PTO locks in “out” position. To release from detent, just pull up on “T” lift below the knob and move lever to desired position.

The illuminated position strip and lever indicator provide position range identification at night.

Felsted Dump Body Controls are constructed of high quality materials and workmanship incorporating hardened steel parts and a rugged housing. The stand has a tough coating for durability and long life. The control is sealed to keep engine noise, dirt and fumes from entering the cap. All controls have a maximum 3” standard cable travel and, for ease of installation, come complete with mounting hardware for both 4 & 6 series cables.
**T-Handle Dump Body Control Systems**

<table>
<thead>
<tr>
<th>Fits into 59000 Tower</th>
<th>Fits into 59015 Tower</th>
<th>Fits into 59015 Tower</th>
<th>Fits into 59015 Tower</th>
</tr>
</thead>
<tbody>
<tr>
<td>55064 PTO</td>
<td>55317 Hoist/Open</td>
<td>55317-2 Hoist/Muncie PTO</td>
<td>55317-3 Hoist/Chelsea PTO</td>
</tr>
<tr>
<td>55064-1 PTO w/Switch</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>55065 Hoist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fits into 59015 Tower</th>
<th>Fits into 59016 Tower</th>
<th>Fits into 59016 Tower</th>
<th>Fits into 59016 Tower</th>
</tr>
</thead>
<tbody>
<tr>
<td>55062 Hoist/PTO</td>
<td>55067 Hoist/PTO/PTO</td>
<td>55780-2 Hoist/Hoist/Muncie PTO</td>
<td>55780-3 Hoist/Hoist/Chelsea PTO</td>
</tr>
<tr>
<td>55062-1 Hoist/PTO</td>
<td>55067-1 Hoist/PTO/PTO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>w/Switch</td>
<td>w/Switch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55066 Hoist/PTO</td>
<td>55067 Hoist/PTO/PTO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All Felsted Hoist Controls lock in “Neutral” Position. All Felsted PTO Controls Lock in “OUT” Position.

**Additional Dump Body Accessories**

<table>
<thead>
<tr>
<th>Towers</th>
<th>Air PTO Kits</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>59000 Single</td>
<td>(Top Plate and Hardware Only)</td>
<td>59002 Single Top Mount Flange</td>
</tr>
<tr>
<td>59015 Double</td>
<td></td>
<td>59009 Single Wedge Mounting Kit (17” Angle Wedge)</td>
</tr>
<tr>
<td>59016 Triple</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Cables**

- 100-4323-Length” Bulkhead/Clamp
- 100-4333-Length” Clamp/Clamp
- 100-6323-Length” Bulkhead/Clamp
- 100-6333-Length” Clamp/Clamp

(See Felsted HP Cable Catalog)

www.cccables.com
Systems Available for Allison™ 1000/2000/2400
Shifters, Connection Kits, Cables, Fluid Level Indicators

1. Verify Proper Installation
   A. Connection of Cable at Shift Control
      - Pivot should be centered on available cable rod thread unless otherwise noted.
   B. Cable Routing
      - For maximum efficiency, cables should always be installed as straight as possible.
      - Cable bends should be avoided. When changes in cable direction are necessary, the bends should be as large as practical. Minimum bend radius for four series cable is 5", six series is 7".
      - The addition of excessive bends and tight bend radii may make shifting more difficult.
      - Cable routing should always be as short and direct as possible.
      - Cable should be secured to adjacent structures to prevent movement under vehicle operating conditions. Always secure cables along straight sections of the cable; clamp at tangents to the cable bend.

2. Adjust Shift Cable at Transmission
   Place shift control in neutral and transmission into its neutral detent. Install pivot onto shift cable rod at the transmission end of cable. Grasp rod and pull with enough force to move the shifter handle against the side of its neutral detent. Note the location of pivot centerline versus its mating hole in lever. Again grasp rod and push with enough force to move the shifter handle against the opposite side of its neutral detent. Adjust pivot so that when rod is pushed or pulled as described above the pivot centerline moves an equal distance on either side of its mating hole center. Check to make certain that as the shift control selects each gear position, the pivot continues to free pin (fit freely) with its mating hole. After adjustment is complete, torque jam nut to 75 in-lbs and install cotter pin.

   - Total Backlash = Total Degrees Bend x Backlash Factor
   - Backlash
     The backlash of a cable results when the core moves from the inside corner to the outside corner of a bend, and vice versa, during changes in direction. Backlash is compounded by the degrees of bend in the cable – the more bend, the more backlash. Total backlash can be determined with the above formula.

Consult factory for more details on systems available for your application.
Specifications subject to change without notice.

In Addition to Shifters and Cables, we have Transmission Fluid Level Indicators for Allison™ 1000/2000/2400

Fluid level indicators offer ergonomic design, overmolded cap and spouts, complete product assembly, and color molded to customer specifications.

---

Fluid level indicators offer ergonomic design, overmolded cap and spouts, complete product assembly, and color molded to customer specifications.
**ALLISON 1000/2000 SHIFT SYSTEM**

**ASSEMBLY PART NUMBER**

- **BASE #3**
- **ASSEMBLY CABLE**
- **CABLE OPTIONS**
  - CHART #1
  - CHART #2
  - CHART #3 (LEFT HAND MOUNT)
  - CHART #4 (RIGHT HAND MOUNT)

**PICTURE SHOWN WITH INTERLOCK (PARK SOLENOID)**

**CABLE 100-04333-LGTH**

- STANDARD PUSH—PULL CABLE
- 3 INCH TRAVEL
- CLAMP STYLE ENDS
- ALL STEEL PARTS ARE PLATED OR STAINLESS STEEL

**TRANSMISSION KIT 000-59534-0000**

- ONE KIT FOR PARK AND NON-PARK OPTION
- ALL PARTS ARE PLATED STEEL
- INCLUDES ALL ATTACHMENT HARDWARE
- LEVER HOLES IDENTIFIED FOR PARK OPTION

**OTHER CONFIGURATIONS MAY BE AVAILABLE, CONTACT ORSCHLERN AT 330/279-0204**
The T-Handle and Push Button shifters are time proven designs for rugged operation in trucks and buses. They have flexible options available and the T-Handle can be custom assembled by many of our F.A.S.T. distributors.

Get it F.A.S.T.®!

Specifications

- Lamp Illumination: 14 volts, orange lens
- Switches: ball type, see options for Neutral and/or Reverse
- Travel: 3 inches
- Cable Connection: 4 series (1/4-28) or 6 series (5/16-24)
- Cable Entry: Push or pull to reverse, 4 hanger positions
- “2nd Neutral” type available for Allison Transmissions

<table>
<thead>
<tr>
<th>Transmission Models</th>
<th>Basic Number</th>
<th>P-B Shifter</th>
<th>2nd Neutral</th>
<th>Position Strip</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALLISON</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AT 540, AT 545, AT 543</td>
<td>55051</td>
<td>55751</td>
<td>56051</td>
<td>R,N,D,3,2,1</td>
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<tr>
<td>MT 643, MT 647, MT 644 (MT 640)</td>
<td>55052</td>
<td>55752</td>
<td>56052</td>
<td>R,N,2-5,2-4,2,1</td>
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<tr>
<td>MT 653 DR</td>
<td>55053</td>
<td>55753</td>
<td>56053</td>
<td>R,N,1-5,1-4,1-3,1-2,1</td>
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<tr>
<td>CLT 650 (MT 650)</td>
<td>55054</td>
<td>55754</td>
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<td>R,N,D,4,3,2,1</td>
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<tr>
<td>MT 654 CR, MT 750 CRD</td>
<td>55055</td>
<td>55755</td>
<td>56055</td>
<td>R,N,2-5,2-4,2,3,2,1</td>
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<tr>
<td>CLT 654</td>
<td>55056</td>
<td>55756</td>
<td>56056</td>
<td>R,N,D,3,2,1</td>
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<tr>
<td>HT 730</td>
<td>55057</td>
<td>55757</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HT 750 DRD CL (B) T 750</td>
<td>55058</td>
<td>55758</td>
<td>56058</td>
<td></td>
</tr>
<tr>
<td>HT 740, HT 740FS, HT 740RS</td>
<td>55059</td>
<td>55759</td>
<td>56059</td>
<td></td>
</tr>
<tr>
<td>AT542N, AT545N</td>
<td></td>
<td></td>
<td></td>
<td>55934 MECHANICAL USES CABLE</td>
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<tr>
<td>AT1542N, AT1545N</td>
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<td></td>
<td></td>
<td>P-B,R,N,D,D3,D1</td>
</tr>
<tr>
<td>AT542N, AT545N</td>
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<td></td>
<td></td>
<td>55946 ELECTRICAL</td>
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<tr>
<td>AT1542N, AT1545N</td>
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<td></td>
<td></td>
<td>P-B,R,N,D,D3,D1</td>
</tr>
</tbody>
</table>

Items listed within yellow field are Basic Part Numbers. Refer to these when ordering a shifter.

See page 6 for Shift Inhibitor and 2nd Neutral P-B Shifters.
Ordering the exact shifter that meets your requirements is not difficult. Simply follow the instructions below to create your own part number. (Example: you are ordering basic part #55051 to fit your Allison transmission #MT 643. You desire the following configuration: Right-hand mount/reverse to front (Chart 1, Option #2); push to reverse/vertical cable hanger (Chart 2, Option #7); 4 Series Cable (Chart 3, Option #4); No Switches (Chart 4, Option #0). Your part number would be 55051-2740.)

1. Match your automatic transmission model to the basic part number. This is your BASIC NUMBER.

2. Refer to Charts 1 through 4 on this page for assembly configuration in order to meet vehicle and system requirements. (Not applicable to Shift Inhibitor and 2nd Neutral P-B Shifter.)

3. Follow the form below and enter the option number desired from each chart in the appropriate order.

**EXAMPLE**

<table>
<thead>
<tr>
<th>BASIC NUMBER</th>
<th>OPTION # from chart 1</th>
<th>OPTION # from chart 2</th>
<th>OPTION # from chart 3</th>
<th>OPTION # from chart 4</th>
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</thead>
<tbody>
<tr>
<td>55051</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td>0</td>
</tr>
</tbody>
</table>

**CONTROL MOUNT/REVERSE POSITION OPTIONS**

- **Chart 1**
  - OPTION #1: Left-Hand Mount
  - OPTION #2: Right-Hand Mount
  - OPTION #3: Left-Hand Mount
  - OPTION #4: Right-Hand Mount

**CABLE SERIES OPTIONS**

- **Chart 3**
  - OPTION #4: 4 Series
    - 1/4 - 28 Thread (.25 - 28)
  - OPTION #6: 6 Series
    - 5/16 - 24 Thread (.31 - 24)

**ELECTRIC SWITCH OPTIONS**

- **Chart 4**
  - OPTION #0: No Switches
  - OPTION #1: Reverse Switch
  - OPTION #2: Neutral Switch
  - OPTION #3: Reverse and Neutral Switch

**CABLE HANGER BRACKET POSITION OPTIONS**

- **Chart 2**
  - **REVERSE TO FRONT** - USE WITH CONTROL MOUNT OPTIONS 1 & 2
    - OPTION #1: Cable PULLS Transmission Arm into REVERSE
    - OPTION #5: Cable PUSHES Transmission Arm into REVERSE
    - OPTION #3: Cable PULLS Transmission Arm into REVERSE
    - OPTION #7: Cable PUSHES Transmission Arm into REVERSE
  - **REVERSE TO REAR** - USE WITH CONTROL MOUNT OPTIONS 3 & 4
    - OPTION #2: Cable PUSHES Transmission Arm into REVERSE
    - OPTION #6: Cable PULLS Transmission Arm into REVERSE
    - OPTION #4: Cable PUSHES Transmission Arm into REVERSE
    - OPTION #8: Cable PULLS Transmission Arm into REVERSE
Transmission Connection Kits

Transmission kits come complete with shift arm, transmission mounting bracket, cable hanger and required hardware. Connection kits are designed to fit any of the five most popular entry positions to the transmission shift arm. Refer to the following drawings to find the cable entry that best fits your vehicle requirements and shifter control positions (push to reverse, pull to reverse), then assemble the kit to match the installation required. Shown below are configurations that can be made from the Universal Kit. (Universal Kit #59005 includes all parts to assemble any 59004 and 59006 kit configuration.)

CONFIGURATION #1
Cable PUSHES Transmission Arm into REVERSE. Use with Shifter Control Positions numbers 2, 4, 5, 7. Cable 100-4333-L / 100-6333-L

CONFIGURATION #2
Cable PULLS Transmission Arm into REVERSE. Use with Shifter Control Positions numbers 1, 3, 6, 8. Cable 100-4333-L / 100-6333-L

CONFIGURATION #3
Cable PUSHES Transmission Arm into REVERSE. Use with Shifter Control Positions numbers 2, 4, 5, 7. Cable 100-4333-L / 100-6333-L

CONFIGURATION #4
Cable PULLS Transmission Arm into REVERSE. Use with Shifter Control Positions numbers 1, 3, 6, 8. Cable 100-4333-L / 100-6333-L

CONFIGURATION #5
Cable PUSHES Transmission Arm into REVERSE. Use with Shifter Control Positions numbers 2, 4, 5, 7. Cable 100-4333-L / 100-6333-L

TRANSMISSION CONNECTION KITS

UNASSEMBLED UNIVERSAL KIT OIL PAN MOUNT
59004 4 Series
59006 6 Series
59005 4 and 6 Series Hardware
Kits to be assembled in field to fit installation required.

MACHINE PAD MOUNT
59369-1 4 Series
59369-2 6 Series
Mount to machine pad above the transmission shift arm. They do not mount to oil pan bolts as shown in diagrams above. * HT Series, MT 654 with 4.5" oil pan. For refuse and HD applications.

MOUNTING FLANGE
59002
Made of prefabricated steel with a matte black epoxy finish. Simplifies a top mount installation and is perfect for vehicle conversions. Kit is complete with control mounting hardware. Use with cable hanger bracket in any position.

SWITCH AND PIN SET KIT
50036-1

SWITCH SET
50036-2

PIN SET
50036-3

FINGER RELEASE KIT
59193-1

T-HANDLE KIT
59228

MOUNTING TOWER
59000 (13")
59035 (9")
A prefabricated tower with a matte black epoxy finish. Features access panels on both sides for easy installation and adjustment. A rubber floor gasket is included with tower. Kit is complete with control mounting hardware. For use with cable hanger positions #3, 4, 7, and 8 ONLY!

PUSH-PULL SHIFT CABLES
(Used with Controls and Kits)
4 Series: 1/4 - 28 thread, base part number: 100-4333 length (recommended)
6 Series: 5/16 - 24 thread, base part number: 100-6333 length
This product combines the strength and reliability of the T-Handle Shifter with the latest in manufacturing technologies to produce a high value control system for our customers.

As an added feature, we have incorporated a quick-connect cable mounting system into this control. Utilizing a clamp built into the cable mounting bracket, the assembler needs only a standard 1/4 x 1" bolt and locknut to attach the cable to the control. This allows faster assembly of the cable, while using common mounting hardware available anywhere.

STANDARD FEATURES:

- Steel chassis and handle assembly
- Black E-coat finish on handle and zinc plating on other metal parts for corrosion protection
- Black textured polymer knob and trim covers
- Four 1/4-20 threaded mounting holes
- All detents are positive locking (no ramping between detents)
- Requires 4 series, 3" travel cable with clamp type hub and 1/4-28 rod threads
- Maximum 2-1/2" of actual cable travel produced
- Built-in cable clamp requires a 1/4 x 1" bolt w/locknuts: Kit #NG0016-1
- Unthreaded pivot for easy cable hook-up

AVAILABLE CONFIGURATIONS:

- Right- or left-hand mounting
- Push or pull to reverse
- Top mounting plate available
- 14 or 28 VDC illumination, single or dual (ground included) wire leads
- Electrical switches – contact factory
- Side push button factory preset at 0 or 45 degrees
- Cable bracket angle factory preset at 0, 30, 60, or 90 degrees.
- Currently available for Allison AT545, MT643, MT653DR, MT654CR, HT740, HT750CR, HT750DR, HT754CR
- There are no charts to build a part number with this style control. Consult factory with specifications to receive recommendation and part number.
**Shift Inhibitor**

The Shift Inhibitor is designed to prevent costly drivetrain damage due to high RPM shifting.

Automatic transmissions in refuse packers and similar heavy-duty vehicles, especially those involved in frequent stop-and-go PTO operations where engine speeds above idle are required, can suffer major abuse from improper shifting. If the driver does not wait until engine RPMs return to idle before shifting, high inertial loads can be forced upon the transmission and drivetrain, potentially leading to extensive and expensive damage.

The Shift Inhibitor System combats this by delaying the shifting process until the engine has returned to idle speed. It is a pneumatic-mechanical system and complies with the Allison® Transmission Watch Notice #65, requiring a neutral to range shifter inhibitor system.

**SYSTEM COMPONENTS:**
- Shift inhibitor control
- Engine speed sensor*
- Speed switch*
- Airbrake Tubing*
- Push-Pull Cable
- Fittings*
- Transmission Connection Kit

* These items are not supplied. Use this bulletin to determine the shifter part number, then consult with Sales/Engineering to create the correct system for your application.

**How to Order the Shift Inhibitor and 2nd Neutral P-B Shifter:**

1. Select proper BASIC NUMBER box from page 2 of this brochure.

2. Select position from Chart 1 on page 3.

3. Select Cable Series from Chart 3 on page 3.

4. Select Hanger Bracket Position from Chart 2 or Chart 2a right. Note: If using options from chart 2 on page 3, place a “0” prefix with the single digit in box below.

**NOTE:** These shifters offer 4 positions NOT available with the standard T-handle shifters. They are shown as additional options on this page.

---

**2nd Neutral P-B Shifter**

This control is used on Allison’s AT transmissions that have a 2nd neutral position beyond reverse and no internal parking pawl mechanism. Movement of the shift selector from reverse to the “PB” position will shift the transmission into 2nd neutral and actuate the vehicle Spring Parking Brake system control.

In the mechanical control, brake actuation is accomplished through a push/pull cable. In the electrical control, brake actuation is accomplished through an electrical switch.

The shift position indicator reads “PB R N D3 D1”.

**SPECIFICATIONS:**
- Rugged steel construction.
- Four 1/4-20 threaded mounting holes.
- 14 volt illumination, single wire with chassis ground.
- Uses a 4 series High Performance transmission shift cable.
- Detents are ramped “D1” thru “N” on upshift and “R” to “N” on downshift.
- Mechanical brake actuation cable is 3 series. Cable travel is .74” from “R” to “PB”.
- Electrical brake actuation switch has contacts closed in all positions “D1” thru “R”. Switch contacts open in “PB” position only. Electrical load not to exceed 1 amp inductive @ 13 VDC.
Modulators

The modulator cable control is designed to send the engine throttle rate (on a mechanically governed engine) to the hydraulic control valve in the transmission. It will fit Allison™ Transmission models AT500, MT600, HT700, V730, CLT650, and CLBT750 series.

**Get it F.A.S.T.®!**

**SPECIFICATIONS:**
- Control Cable is polymer lined rated at 300° F (149° C)
- 4 inch bend radii minimum
- Built-in spring returns to idle
- Pull function recommended, but push also available
- Can be locally assembled via F.A.S.T. cable assembly distributors.

### Modulator Slip Link Kit (shown at right)

The Slip-Link kit includes the necessary hardware for complete installation of the kit to the engine fuel control lever. Kit includes a slotted slip-link, link pin, flat washer, cotter pin and locknut.

To order, see chart below.

<table>
<thead>
<tr>
<th>Polymer Link Part No.</th>
<th>Thread Size</th>
<th>For Use with Modulator Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>59049-1</td>
<td>(3 Series) 10-32UNF-2A THD</td>
<td>2124, 2179, 2180</td>
</tr>
<tr>
<td>59049-2</td>
<td>(4 Series) 2528UNF-2ATHD</td>
<td>2220, 2225, 2230, 2235</td>
</tr>
</tbody>
</table>

**Pull Type** | **Description** | **Transmission**
---|---|---
2124 | Clamp 3-series end | FMX (threaded mount)
2130 | Bulkhead 3-series end | Allison
2179 | Clamp 3-series end | C-6
2180 | Bulkhead 3-series end | C-6
2182 | Bulkhead 4-series end | Hydramatic (350/400)
2183 | Clamp 4-series end | Hydramatic (350/400)
2220 | Bulkhead 4-series end | Allison
2230 | Clamp 4-series end | Allison

**Push Type** | **Description** | **Transmission**
---|---|---
2225 | Bulkhead 4-series end | Allison
2235 | Clamp 4-series end | Allison

Specifications subject to change without notice.
PARKING BRAKE LEVERS

Orscheln hand levers are designed on the principle of variable mechanical advantage, and therefore, variable hand effort. During the initial movement of the lever from the “off” to the “on” position, there is great linear movement in comparison to the output effort. As the lever approaches the “on” position, the output effort becomes greater in comparison to the linear movement. As the lever passes over center, or toggle position, the mechanical advantage is theoretically infinite.

Orscheln hand levers also provide a screw-type adjustment feature which allows the operator to make system adjustments. This is accomplished by simply turning the adjustment knob on the lever handle. Orscheln’s standard levers are shown in this section. Using these standard levers where possible can generally provide shorter lead-times and lower costs. When custom designs are needed, we offer many options and variations. The key characteristics to remember when designing a lever system include safety, required lever output, mounting location, operator access, and handle effort. Mounting bracket design should be determined by travel, cable clamp pattern, and mounting preference.
ORSCHELN LEVER NO. 02182600

Recommended Applications and Features:

Side Mount with Mounting Holes for Frame or Other Areas where Mounting Surface Structure will Support Brake Load. Usually Used with Rod Direct to Brake. Spacers Supplied.

HOLE FOR 5/16 (7.9) DIA. PIN

81002454 - .12 (3.0) DIA. PBT STRAND
81006273 - .19 (4.8) DIA. PBT STRAND

81002594 - .12 (3.0) DIA. PBT STRAND
81006099 - .19 (4.8) DIA. PBT STRAND

These are recommended cable parts for connecting a cable to this lever assembly.
Recommended Applications and Features:

ORSCHELN LEVER NO. 02182900

Recommended Applications and Features:

Transmission Mount Type for Mounting on Transmission Bosses, Frames, etc. Bellcrank Changes Travel 90 Degrees without Load Loss.

Normally Used with Rod, can be Used with Cable by Attaching Strand with Clevis to Bellcrank and Conduit to Common Mounting Surface. Mounting Spacers Supplied.
ORSCHELN LEVER NO. 02183100

Recommended Applications and Features:


"A" — Handle Movement (Degrees) Full Off to Top Center

"B" — Cable Travel (Inches)

These are recommended cable parts for use with this lever assembly. Dimension 2.38 (60.5) depicts length when lever is in "off" position. This dimension for use in calculating cable length.

NUT AND BOLT SHOWN FOR REF. ONLY, NOT SUPPLIED WITH ASSEMBLY.

SEE VIEW "A"

81002510 - .12 (3.0) DIA. PBT STRAND
81006116 - .19 (4.8) DIA. PBT STRAND
81006287 - .12 (3.0) DIA. PBT STRAND
61006100 - .19 (4.8) DIA. PBT STRAND
ORSCHENL LEVER NO. 02183200

Recommended Applications and Features:


These are recommended cable parts for use with this lever assembly. Dimensions 2.21 (56.1) and 3.21 (81.5) depict lengths when lever is in "off" position. The 1.56 (39.6) (cable length) dimension will not allow the lever to be put in full "off" position. This will reduce the net travel of the lever. The above dimensions are used to calculate cable length.
ORSCHELN LEVER NO. 02183300

Recommended Applications and Features:


These are recommended cable parts for use with this lever assembly. Dimension 3.12 (79.2) depicts length when lever is in "OFF" position. This dimension for use in calculating cable length.
ORSCHLEIN LEVER NO. 02183400

Recommended Applications and Features:

Flange Mount for Bulkhead, Island or Floor Installation. Use with One Cable. With Mounting Holes for Cable Clamp. Clamp and Spacers Supplied.

SEE VIEW "A"

 THESE ARE RECOMMENDED CABLE PARTS FOR USE WITH THIS LEVER ASSEMBLY. DIMENSION 1.70 (43.2) DEPICTS LENGTH WHEN LEVER IS IN "OFF" POSITION. THIS DIMENSION FOR USE IN CALCULATING CABLE LENGTH.
MOUNTING BRACKETS

NOTE "A": SLOT OPTIONS
1) WITH STANDARD HANDLE, SLOT FOR 5/16 DIA. PIN, 2.75 LONG
2) WITH "WEST COAST" HANDLE, SLOT FOR 3/8 DIA. PIN, 4.00 LONG

NOTE "B": CUSTOMER OPTION
THIS PORTION OF THE BRACKET IS FOR CUSTOMER OPTIONS. MOUNTING HOLES CAN BE LOCATED AT ANY POINT. STANDARD BRACKET WILL BE USED WHENEVER POSSIBLE WITH CUSTOMER APPROVAL.

TWO BOLT, SINGLE CLAMP FOR .50 DIA. FITTING

SINGLE BOLT, SINGLE CLAMP FOR .50 DIA. FITTING

.580/.575 DIA. HOLE WITH KEY WAY

MOUNTING HOLE FOR SNAP-IN OR 9/16 THREADED FITTING WITH JAM NUTS.

NOTE: CLAMPS AND SPACERS ARE PROVIDED AS ADDITIONAL PARTS WITH LEVER, NUTS AND BOLTS ARE SHOWN AS REF. ONLY.

ANGULAR FLANGE AVAILABLE WITH ANY SINGLE OR DOUBLE CLAMP PATTERN

SINGLE BOLT, DOUBLE CLAMP FOR .50 DIA. FITTINGS

90 DEGREE FLANGE AVAILABLE WITH ANY SINGLE OR DOUBLE CLAMP PATTERN
MOUNTING BRACKETS

NOTE “A”: SLOT OPTIONS
1) WITH STANDARD HANDLE, SLOT FOR 5/16 DIA. PIN, 2.47 LONG
NOTE “B”: CUSTOMER OPTION

THIS PORTION OF THE BRACKET IS FOR CUSTOMER OPTIONS.
MOUNTING HOLES CAN BE LOCATED AT ANY POINT. STANDARD BRACKET WILL BE USED WHENEVER POSSIBLE WITH CUSTOMER APPROVAL.

SINGLE CLAMP FOR .50 DIA. FITTING
CLAMP AND SPACER ARE ADDITIONAL PARTS WITH LEVER.
NUT AND BOLT ARE SHOWN FOR REF. ONLY

MOUNTING HOLE FOR SNAP-IN OR 9/16 THREADED FITTING WITH JAM NUTS

90 DEGREE FLANGE AVAILABLE WITH SINGLE CLAMP

ANGULAR FLANGE AVAILABLE WITH SINGLE CLAMP
HANDLE OPTIONS

STANDARD LEVER HANDLE:
1. MAX. LEVER OUTPUT 3000 LBS. (13.3 KN)
2. STANDARD LENGTHS "X":
   8.12 (206)
   8.94 (227)
   9.88 (251)
   10.38 (264)
   12.00 (305)
3. ADJUSTMENT KNOB IS FRICTION CONTROLLED
4. RECOMMENDED USAGE:
   FORK LIFTS, ALL SIZES
   TRUCK TRACTOR
   LIGHT TRAILERS 3000 LBS. G.V.W.
   LIGHT INDUSTRIAL EQUIPMENT

"WEST COAST" LEVER HANDLE
1. MAX. LEVER OUTPUT 4000 LBS. (17.8KN)
2. STANDARD LENGTHS: 11.12 (282)
   12.75 (324)
   14.00 (356)
3. ADJUSTMENT KNOB IS FRICTION CONTROLLED
4. RECOMMENDED USAGE:
   HEAVY CONSTRUCTION EQUIPMENT
LEVER LOCK OPTIONS

SAFETY HOOK OPTION WITH STANDARD HANDLE

HANDLE LENGTHS "L"
6.00 (152)
12.00 (305)
12.25 (310)

RATCHET AND PIVOT OPTION WITH STANDARD HANDLE

HANDLE LENGTHS "L"
9.00 (229)
10.38 (263)
10.50 (267)

PROVISION FOR PADLOCK

LIGHT SWITCH OPTIONS

OPTION: "BRAKE ON" LIGHT SWITCH
NORMALY ON
NOT RECOMMENDED FOR USE IN HOSTILE ENVIRONMENTS

OPTION: "BRAKE ON" LIGHT SWITCH
NORMALY ON
WEATHER RESISTANT
FOOT PEDALS

OPTION 1
FINGER RELEASE
(SHORT PEDAL ONLY)

STANDARD RELEASE
WITH OPTIONAL REMOTE
RELEASE ROD ASSEMBLY

OFF POSITION

OFF POSITION

3 MTNG. HOLES
FOR 5/16
(8 mm) BOLTS
FULL
APPLIED POSITION

2.50
(63.5)

5.12
(130.0)

5.75
(146.0)

5.06
(128.5)

5.00
(127.0)

1.00
(25.4)

5.00
(127.0)

1.50
(38.1)

9.00
(229.0)

2.06
(52.3)

PEDAL LENGTH

"X" MAX.
TRAVEL

CONDUIT MTNG. HOLE
FOR 0.59 (14mm)
FITTINGS

OPTION:
" BRAKE-ON"
LIGHT SWITCH

"X" MAX.
TRAVEL

(307.8)

(184.3)

(127.0)

(101.6)

(136.7)
FOOT PEDAL LEVERS

<table>
<thead>
<tr>
<th>PEDAL LENGTH</th>
<th>MAX. TRAVEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.72 (246.9)</td>
<td>2.12 (53.9)</td>
</tr>
</tbody>
</table>

- .35 x .55 SLOT (8.9 x 13.9)
- MOUNTING HOLES FOR SWITCH
- 3.50 (88.9)
- 9.72 (246.9)
- .65 (16.5)
- 1.03 (26.2)
- 11.40 (289.6)
1/8" PBT BRAKE CABLES

PBT is short for Polybutylene Terephthalate: These cables utilize PET coated strand, PET liner, a patented seal with internal and external features and boundary lubrication. All of these features combine to give Orscheln cables far better corrosion protection than ordinarily galvanized constructions. The 1/8" PET cables are designed for use in light to medium duty applications. These cables are rated at 1,200 pounds or less.
CONDUIT END FITTINGS

81003767 COLLAR

TO FIT SECURELY IN MOUNTING SHOWN AT RIGHT IN "A" SIZE PLATE.

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>95001244</td>
<td>.130/.105 (3.30/2.67)</td>
<td>1.03 (26.2)</td>
</tr>
<tr>
<td>95001388</td>
<td>.205/.170 (5.21/4.32)</td>
<td>.93 (23.6)</td>
</tr>
</tbody>
</table>

SNAP-IN FITTING TO HOLD SECURE IN A .559/.551 (14.20/14.00) DIA. HOLE THRU A "X" MAX. PLATE THICKNESS WITH PRONGS RETURNING TO .600 (15.24) DIA. MIN.

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>&quot;X&quot; MAX. PLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>95001218</td>
<td>.133 (3.38)</td>
</tr>
<tr>
<td>95001434</td>
<td>.193 (4.90)</td>
</tr>
</tbody>
</table>

GAP FOR "X" MAX. PLATE

SNAP-IN FITTING TO HOLD SECURE IN A .580/.575 (14.74/14.60) DIA. HOLE THRU A "X" MAX. PLATE THICKNESS WITH PRONGS RETURNING TO .620 (15.74) DIA. MIN.

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>&quot;X&quot; MAX. PLATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>95001278</td>
<td>.133 (3.38)</td>
</tr>
<tr>
<td>95001279</td>
<td>.200 (5.08)</td>
</tr>
</tbody>
</table>
CONDUIT MOUNTING CLAMPS

81000108 CABLE CLAMP
81000131 LINK SPACER

81000191 CABLE CLAMP

SLOTS FOR .38 (9.7) DIA. BOLTS
.19 (4.8)
.12 (3.0)
1.00 (25.4)
1.47 (37.3)
.25 (6.4)

FOR .50 (12.7) DIA. WHEN CLOSED
.75 (19.0) REF.
1.15 (29.2) REF.
.44 (11.2) REF.

CONDUIT MOUNTING CLIPS

84002475

OPTIONAL WITH END FITTINGS
81002456
81006102
81006288

84004220

OPTIONAL WITH END FITTINGS
81005919
81006103
OPTIONAL STRAND END FITTINGS

5/16 - 24 UNF - 2A

"B" + .12 (3.2)
- .06 (1.6)

"A" + .12 (3.2)

3/8 - 24 UNF - 2A

1.50 + .12
- .06

(38.1 + .32)
- 1.6

2.62 + .12
(66.6 + 3.2)

PART NUMBER
81002491
81002494

PART NUMBER
A
2.88 (73.2)
3.62 (92.0)

B
1.50 (38.1)
2.25 (57.2)

81002478

HOLE FOR "X" DIA. PIN

.25 (6.35)

.75 (19.1)

REF.

1.91 + .06
(48.5 + 1.5)

PART NUMBER
81002510
81002519

"X" DIA. PIN.
.31 (8.0)
.38 (9.5)
STRAND END FITTINGS

81005740

81005756

81002594

81005757
1/8 CLEVIS

HOLE FOR C DIA. PIN

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>*81002454</td>
<td>.210(5.33)</td>
<td>1.56(39.6)</td>
<td>.31(7.9)</td>
<td>.62(15.8)</td>
<td>.31(7.9)</td>
<td>.19(4.8)</td>
</tr>
<tr>
<td>81002535</td>
<td>.210(5.33)</td>
<td>2.38(60.5)</td>
<td>.31(7.9)</td>
<td>.75(19.0)</td>
<td>1.00(25.4)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002536</td>
<td>.210(5.33)</td>
<td>2.38(60.5)</td>
<td>.38(9.7)</td>
<td>.75(19.0)</td>
<td>1.00(25.4)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002537</td>
<td>.210(5.33)</td>
<td>1.75(44.4)</td>
<td>.31(7.9)</td>
<td>.62(15.8)</td>
<td>.38(9.7)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002646</td>
<td>.359(9.12)</td>
<td>1.75(44.4)</td>
<td>.31(7.9)</td>
<td>.75(19.0)</td>
<td>.38(9.7)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002685</td>
<td>.359(9.12)</td>
<td>2.38(60.5)</td>
<td>.31(7.9)</td>
<td>.75(19.0)</td>
<td>1.00(25.4)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002858</td>
<td>.359(9.12)</td>
<td>4.00(101.6)</td>
<td>.38(9.7)</td>
<td>.75(19.0)</td>
<td>.50(12.7)</td>
<td>.25(6.4)</td>
</tr>
<tr>
<td>81002963</td>
<td>.359(9.12)</td>
<td>3.00(76.2)</td>
<td>.31(7.9)</td>
<td>.75(19.0)</td>
<td>.75(19.0)</td>
<td>.25(6.4)</td>
</tr>
</tbody>
</table>

* Designed for use in Orscheln COWL TYPE lever assemblies.

HOLE FOR C DIA. PIN

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>81002545</td>
<td>1.62(41.2)</td>
<td>.31(7.9)</td>
<td>.62(15.8)</td>
</tr>
<tr>
<td>81002546</td>
<td>2.00(50.8)</td>
<td>.31(7.9)</td>
<td>.62(15.8)</td>
</tr>
<tr>
<td>81002550</td>
<td>2.00(50.8)</td>
<td>.38(9.7)</td>
<td>.75(19.0)</td>
</tr>
</tbody>
</table>

* For use with Orscheln BELL CRANK TYPE lever assemblies.
3/16" PBT BRAKE CABLES

3/16" PBT cables offer the same qualities as the 1/8" cables. However, this size of cable is recommended for heavier loads up to 3,000 pounds. Many of the characteristics described in the cable design section will help you in determining which size of cable is right for your application.
CONDUIT END FITTINGS

81006100
-.75 DIA.
(19.0)
-.88 (22.4)
-.50 (12.7) DIA.

TO BE USED WITH ONE OF THE FOLLOWING CLAMPS
81000191
81000108 W/81000131

81006103
-.75 DIA.
(19.0)
-.32 (8.2)
-.10 (2.5)
-.554 DIA.
(14.1)

84002465 JAM NUTS OPTIONAL

81006101
.75 DIA.
(19.0)
9/16 - 12 UNC - 2A
2.00 (50.8)

81006102
.75 DIA.
(19.0)
-.047 (1.21)
-.554 DIA.
(14.1)

FOR USE WITH OPTIONAL E-RING
84002475

PART TO BE SECURE IN .580/.575 (14.8/14.6) DIA. HOLE THRU "A" MAX PLATE WITH PRONGS RETURNING TO .62 (15.7) DIA. MIN.

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>95001340</td>
<td>.127 (3.0)</td>
</tr>
<tr>
<td>95001341</td>
<td>.193 (4.9)</td>
</tr>
<tr>
<td>95001339</td>
<td>.253 (6.4)</td>
</tr>
</tbody>
</table>
3/16 PBT

OPTIONAL STRAND END FITTINGS

**1/4 - 28 UNF - 2A**

- **A ± .12 (3.0)**
- **B ± .12 (3.0)**
- **.06 (1.5)**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>81006109</td>
<td>3.00 (76.2)</td>
<td>1.50 (38.1)</td>
</tr>
</tbody>
</table>

**5/16 - 24 UNF - 2A**

- **A ± .12 (3.0)**
- **B ± .12 (3.0)**
- **.06 (1.5)**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>81006111</td>
<td>3.00 (76.2)</td>
<td>1.50 (38.1)</td>
</tr>
<tr>
<td>81006112</td>
<td>3.75 (95.3)</td>
<td>2.25 (57.2)</td>
</tr>
</tbody>
</table>

**3/8 - 24 UNF - 2A**

- **A ± .12 (3.0)**
- **B ± .12 (3.0)**
- **.06 (1.5)**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>81006113</td>
<td>2.62 (66.6)</td>
<td>1.50 (38.1)</td>
</tr>
<tr>
<td>81006114</td>
<td>3.62 (92.0)</td>
<td>2.50 (63.5)</td>
</tr>
</tbody>
</table>

**.38 (9.7) DIA.**

- **.88 REF. (22.4)**
- **.31 MAX. (7.9)**

**81006099**

**HOLE FOR A DIA. PIN**

- **.75 REF (19.0)**
- **1.91 ± .06 (48.5 ± 1.5)**
- **25 (6.4)**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>81006116</td>
<td>.31 (7.9)</td>
</tr>
<tr>
<td>81006117</td>
<td>.38 (9.7)</td>
</tr>
</tbody>
</table>
3/16 CLEVIS

**HOLE FOR C DIA. PIN**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>81002963</td>
<td>3.00 (76.2)</td>
<td>.62 (15.8)</td>
<td>.31 (7.9)</td>
</tr>
<tr>
<td>81006106</td>
<td>3.00 (76.2)</td>
<td>.75 (19.0)</td>
<td>.38 (9.7)</td>
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</tbody>
</table>

**HOLE FOR C DIA. PIN**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;81006273</td>
<td>1.50 (38.1)</td>
<td>.62 (15.8)</td>
<td>.31 (7.9)</td>
</tr>
<tr>
<td>81006107</td>
<td>2.00 (50.8)</td>
<td>.62 (15.8)</td>
<td>.31 (7.9)</td>
</tr>
<tr>
<td>81006108</td>
<td>1.62 (41.2)</td>
<td>.75 (19.0)</td>
<td>.38 (9.7)</td>
</tr>
</tbody>
</table>

*Designed for use in Orschel COWL TYPE lever assemblies.*

**HOLE FOR C DIA. PIN**

<table>
<thead>
<tr>
<th>PART NO.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>81002635</td>
<td>2.59 (65.5)</td>
<td>.62 (15.8)</td>
<td>.31 (7.9)</td>
<td>.32 (8.2)</td>
</tr>
<tr>
<td>81002914</td>
<td>2.59 (65.5)</td>
<td>.75 (19.0)</td>
<td>.38 (9.7)</td>
<td>.32 (8.2)</td>
</tr>
<tr>
<td>81006104</td>
<td>2.00 (50.8)</td>
<td>.62 (15.8)</td>
<td>.31 (7.9)</td>
<td>.28 (7.1)</td>
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<tr>
<td>81006105</td>
<td>2.00 (50.8)</td>
<td>.75 (19.0)</td>
<td>.38 (9.7)</td>
<td>.28 (7.1)</td>
</tr>
</tbody>
</table>
CONDUIT MOUNTING CLAMPS

81000108 CABLE CLAMP
81000131 LINK SPACER

81000131 LINK SPACER
81000108 CABLE CLAMP

SLOTS FOR .38 (9.7) DIA. BOLTS
.19 (4.8)
.12 (3.0)
1.00 (25.4)
1.47 (37.3)
.25 (6.4)R

81000191 CABLE CLAMP

.75 (19.0) REF.
FOR .50 (12.7) DIA. WHEN CLOSED
1.15 (29.2) REF.
SLOTS FOR .31 (7.9) DIA. BOLT
.44 (11.2) REF.

84002475

OPTIONAL WITH END FITTINGS
81002456
81006102
81006288

84004220

OPTIONAL WITH END FITTINGS
81005919
81006103
This section gives you three different layouts to choose from. By filling out and returning the specification sheet, you are assured of receiving a trailer system that is “custom” designed for your application. In addition, our break-away and padlock options provide additional protection. The mechanical break-away feature will engage the trailer brakes automatically if the towed vehicle becomes unhooked during transportation. The lockable over-center lever prevents any unauthorized person from moving the trailer once the system is engaged and locked.
ORSCHEN PARKING BRAKE SYSTEM SPECIFICATION SHEET

In order to ensure an accurate quote, please provide the following information:

A1 _________ Front of frame to centerline axle. (Layouts 1 & 2)
A2 _________ Dual axle only. (Layout 3)
B1 _________ Centerline of axle to conduit mount on frame. (Layouts 1 & 2)
B2 _________ Dual axle only. (Layout 3)
C1 _________ Bottom of frame to centerline of axle. (Layouts 1 & 2)
C2 _________ Dual axle only. (Layout 3)
D1 _________ Centerline of axle to centerline of front spring hanger bracket through bolt. (Layouts 1 & 2)
D2 _________ Dual axle only. (Layout 3)
E _________ Centerline of frame and equalizer to outside of frame.
F1 &2 _______ Backing plate to backing plate.

“A” FRAME LEVER MOUNT INFORMATION

G _________ Front of frame to edge of lever intersecting “A” frame. (Layouts 2 & 3)
H _________ Centerline of frame and equalizer to edge of lever intersecting “A” edge. (Layouts 2 & 3)
I. _________ Notification of any obstacles below the trailer frame that may interfere with cable routings.

GENERAL INFORMATION

1. Gross vehicle weight, fully loaded ____________ pounds.
2. Brake manufacturer and part number:
   Mfg. ________________ Left ________________ Right ________________
3. Lever location, if other than shown on layouts ________________
4. Type of axles ________________
5. Frame material width at all points where cables are to mount ________________
Felsted Heavy Duty
Automatic Transmission Controls

Felsted HP Control Cables

Felsted Fluid Level Indicator Systems
for Engines and Transmissions

Orscheln Parking Brake Controls
and Control Cables

www.cccables.com