PIN CLAMPS
FOR POSITIVE LOCATING AND CLAMPING

**PCT**
12.00 - 16.00mm PIN DIAMETERS
- STANDARD BULLET NOSE PIN
- LOCATING PIN IN SELF-CONTAINED CARTRIDGE. CARTRIDGE IS REPLACEABLE IN FIELD

**PCS**
16.01 - 25.00mm PIN DIAMETERS
- NAAMS COMPLIANT MOUNTING HOLE PATTERN
- PNEUMATIC ACTUATOR NPT or G PORTS
- SOLID STATE CYLINDER SWITCH

**PCM**
25.01 - 40.00mm PIN DIAMETERS
- STANDARD LOW PROFILE PIN
- STANDARD STEEL PART BACKUP
- PIN RETRACT OPTION: LOW PROFILE PIN RETRACTS FLUSH WITH BACKUP
- WORLD SWITCH OPTION
- CUSTOMER SUPPLIED M12x1 PROX SWITCH FOR RETRACT OPTION WITH WORLD SWITCH

**APPLICATIONS**
- ROBOT END EFFECTORS
- END OF ARM TOOLING
- AUTOMOTIVE ASSEMBLY & B/W
- PALLETIZED PART LOCATE & TRANSFER
- WELDING & HIGH CORROSIVE ENVIRONMENTS

RELEASED 9/3/20

Patent #6,786,478
## PIN CLAMP WORKSHEET

<table>
<thead>
<tr>
<th>Project</th>
<th>Station #</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Customer</th>
<th>Contact</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NOMINAL HOLE DIAMETER:

- Single Metal Thickness: __________
- Multiple Metal Quantity: __________ Overall thickness: __________

Will the pin be in geo holes in multiple metal pieces? [ ] Yes [ ] No

### RECOMMENDED PIN DIAMETER:

<table>
<thead>
<tr>
<th>Series, Application</th>
<th>Pin sizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCS, PCT, PCM geo</td>
<td>0.15mm under minimum</td>
</tr>
<tr>
<td>PCS, PCT, PCM material handling</td>
<td>0.5mm under minimum</td>
</tr>
</tbody>
</table>

### FINGER & PIN CLAMP ORIENTATION

**PIN CLAMP MOUNTED HORIZONTALLY:**

Fingers must extend parallel to floor.

**PIN CLAMP MOUNTED INVERTED OR VERTICALLY:**

Fingers may extend in either direction.

<table>
<thead>
<tr>
<th>Part #</th>
<th>Mounting</th>
<th>Fingers</th>
<th>Horizontal</th>
<th>Vertical or inverted</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>@ 0°</td>
<td>@ 90°</td>
</tr>
</tbody>
</table>

### Finger & Pin Clamp Orientation

- **Mounting:** Horizontal or Vertical
- **Fingers:** @ 0° or @ 90°

---

(Do not scale drawing)

ENGINEERED PRODUCTS
800-229-0890 www.welkerproducts.com

Sheets 1 & 2 of a 2 page document.
ORDERING INFORMATION

NOTE: ALL BOXES MUST BE FILLED IN FOR A COMPLETE PART NUMBER

**STANDARD PRICING INCLUDES THESE FEATURES**

**Not available on PCT with pin diameters 12.00 - 12.99mm**

SEE SHEET 14 FOR REPLACEMENT PIN CARTRIDGE & BACKUP ORDERING INFORMATION
GENERAL DIMENSIONS

DESIGNER'S NOTE: SHIMMING RECOMMENDED FOR X, Y, AND Z

PORTS: SEE ACTUATOR OPTION SHEETS

SERIES | A | øB | C | D | E | F | G | H | J | K | *øL | M | N | R | øS | T | U | WGT
-------|---|----|---|---|---|---|---|---|---|---|-----|---|---|---|----|---|---|----|
T      | 80| 74 | 59| 30.00| 60.00| 60| 8 | 16| M8 X 1.25| 16| 12.00-16.00| 19| 108| 18| 35-50| 8 | 3.4 | 12 LBS
C      | 80| 74 | 59| 30.00| 60.00| 60| 8 | 16| M8 X 1.25| 16| 16.01-25.00| 19| 108| 18| 35-50| 11| 4.6 | 12 LBS
M      | 100| 99| 55| 30.00| 60.00| 60| 8 | 16| M10 X 1.5| 20| 25.01-40.00| 19| 110| 22| 51-75| 18| 5.6 | 20 LBS

* DIAMETER RANGE FOR 2-WAY LOCATING PINS ARE DIFFERENT FROM 4-WAY RANGE. SEE SHEET 4

ENGINEERED PRODUCTS
800-229-0890 www.welkerproducts.com
LO冶CING PIN OPTIONS

Pin Diameter
(Ø25.00mm SHOWN)
ORDER IN MILLIMETERS ONLY
.01 INCREMENTS

<table>
<thead>
<tr>
<th>Pin Type</th>
<th>T SERIES DIAMETERS</th>
<th>C SERIES DIAMETERS</th>
<th>M SERIES DIAMETERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12.00 - 16.00</td>
<td>16.01 - 25.00</td>
<td>25.01 - 40.00</td>
</tr>
<tr>
<td>B</td>
<td>12.00 - 16.00</td>
<td>16.01 - 25.00</td>
<td>25.01 - 40.00</td>
</tr>
<tr>
<td>C</td>
<td>13.00 - 16.00</td>
<td>18.00 - 26.00</td>
<td>26.85 - 42.00</td>
</tr>
<tr>
<td>D</td>
<td>13.00 - 16.00</td>
<td>18.00 - 26.00</td>
<td>26.85 - 42.00</td>
</tr>
<tr>
<td>E</td>
<td>12.00 - 16.00</td>
<td>16.01 - 25.00</td>
<td>25.01 - 40.00</td>
</tr>
<tr>
<td>F</td>
<td>12.00 - 16.00</td>
<td>18.00 - 26.00</td>
<td>26.85 - 42.00</td>
</tr>
<tr>
<td>G</td>
<td>13.00 - 16.00</td>
<td>16.01 - 25.00</td>
<td>25.01 - 40.00</td>
</tr>
<tr>
<td>H</td>
<td>13.00 - 16.00</td>
<td>18.00 - 26.00</td>
<td>26.85 - 42.00</td>
</tr>
</tbody>
</table>

STOCK 4-WAY DIAMETERS: 16.00, 19.85, 20.00, 24.85, 25.00, 34.85, 35.00, 39.85, 40.00

4-WAY PINS

VARIES WITH PIN DIAMETER
CONTACT WELKER FOR SPECIFIC DIMENSION

14 STD (OPTION "K")
SEE SHEET 7

2-WAY PINS

RADIAL RELIEF FOR 2-WAY PINS:
T SERIES: 0.50mm
C SERIES: 1.00mm
M SERIES: 1.00mm

OPTION
A  BULLET NOSE PIN WITH FINGERS AT 0°
B  BULLET NOSE PIN WITH FINGERS AT 90°

25.0 AT BACKUP DISTANCE "K"
ALL PIN DIAMETERS
3.0 X 45° CHAMFER
ALL PIN DIAMETERS

OPTION
E  LOW PROFILE PIN WITH FINGERS AT 0°
F  LOW PROFILE PIN WITH FINGERS AT 90°

PIN TYPE OPTION "A"
BULLET NOSE PIN WITH FINGERS SHOWN AT 0° (FINGERS EXTEND & RETRACT PARALLEL TO MOUNTING SURFACE)

PIN TYPE OPTION "E"
LOW PROFILE PIN WITH FINGERS SHOWN AT 90° (FINGERS EXTEND & RETRACT PERPENDICULAR TO MOUNTING SURFACE)

NOTE: FOR OPTIMAL HORIZONTAL APPLICATIONS, ORIENTATION OF THE CLAMP FINGER MOVEMENT SHOULD BE PARALLEL TO THE GROUND FOR ROUND HOLES
**ACTUATOR INFORMATION**

**Series**
- T: PCT Body
- C: PCS Body
- M: PCM Body

**Actuator**

**Port Type & Position**

<table>
<thead>
<tr>
<th>Series</th>
<th>Actuator</th>
<th>Port Type &amp; Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>2 5 0 0</td>
<td>A B A R D 0 3 5 K A</td>
</tr>
</tbody>
</table>

**NOTES: ALL ACTUATORS**

- At loss of air pressure, spring assist will maintain 50 lbs of constant clamp pressure.
- For inverted applications, part weight must not exceed 50 lbs.
- Normal operating temperature for all actuators is -10° to 165°F, -23 to 74°C

**PCT ACTUATOR INFORMATION**

**NOTE:** Cylinder switches not available with actuator A on PCT

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PORTS</th>
<th>CLAMP FORCE (LBS.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1/8&quot; NPT or G 1/8</td>
<td>50</td>
</tr>
<tr>
<td>B</td>
<td>1/8&quot; NPT or G 1/8</td>
<td>50</td>
</tr>
<tr>
<td>T</td>
<td>1/8&quot; NPT or G 1/8</td>
<td>50</td>
</tr>
</tbody>
</table>

**PCS & PCM ACTUATOR INFORMATION**

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>PORTS</th>
<th>CLAMP FORCE (LBS.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>1/8&quot; NPT or G 1/8</td>
<td>220 277 333</td>
</tr>
<tr>
<td>T</td>
<td>1/8&quot; NPT or G 1/8</td>
<td>220 277 333</td>
</tr>
</tbody>
</table>

**TOP VIEW: PORT LOCATION**

<table>
<thead>
<tr>
<th>SWITCH SIDE</th>
<th>TOP VIEW: PORT LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>NPT AT POSITION #1</td>
</tr>
<tr>
<td>B</td>
<td>NPT AT POSITION #2</td>
</tr>
<tr>
<td>C</td>
<td>NPT AT POSITION #3</td>
</tr>
<tr>
<td>D</td>
<td>NPT AT POSITION #4</td>
</tr>
<tr>
<td>J</td>
<td>G AT POSITION #1</td>
</tr>
<tr>
<td>K</td>
<td>G AT POSITION #2</td>
</tr>
<tr>
<td>L</td>
<td>G AT POSITION #3</td>
</tr>
<tr>
<td>M</td>
<td>G AT POSITION #4</td>
</tr>
</tbody>
</table>

**PORT TYPE & POSITION**

(DO NOT SCALE DRAWING)

**ENGINEERED PRODUCTS**
800-229-0890 www.welkerproducts.com

SHEET 6
ACTUATOR DIMENSIONS: A & B
ACTUATOR T ON FOLLOWING SHEET

ACTUATOR A
40mm BORE

NOTES:
• Cylinder switches not available with actuator A on PCT
• Actuator A is only available with PCT

ACTUATOR B
50mm BORE

RELEASE PORT

CLAMP PORT

RELEASE PORT

CLAMP/RETRACT PORT:
PCS, PCM
PCT RETRACT PORT
IS A BREATHET PORT,
SPRING RETRACT

NOTE: Cylinder switches not available with actuator A on PCT

Actuator A is only available with PCT
ACTUATOR T: RETRACT OPTION
FOR RETRACT SEQUENCE SEE SHEET 8

RETRACT OPTION WITH CYLINDER SWITCH

RETRACT OPTION WITH WORLD SWITCH

MUST USE LOW PROFILE PIN OPTIONS E-H FOR PIN TO RETRACT FLUSH TO BACKUP

CUSTOMER SUPPLIED M12x1 PROX SWITCH FOR RETRACT OPTION WITH WORLD SWITCH

PRIMARY CYLINDER SWITCH
SECONDARY CYLINDER SWITCH

CLAMP/RETRACT PORT: PCS, PCM
PCT RETRACT PORT IS A BREATHER PORT, SPRING RETRACT

EXTEND PORT 1/8" NPT or G1/8
RETRACT PORT 1/8" NPT or G1/8

65

73

55

119

25
**PIN CLAMP RETRACT OPTION SEQUENCE**

**STEP 1: PART LOAD**
- **PART LOAD**: Pin is extended, pin fingers retracted.
- **POWER ON**: Sensor 1 on, sensor 2 on.
- **SECONDARY CYLINDER**: Extend port energized.

**STEP 2: PART CLAMP**
- **PART CLAMP**: Primary cylinder retract port energized.
- **SECONDARY CYLINDER**: Extend port energized.
- **SENSOR 2 ON**: Part released.

**STEP 3: PIN RELEASE**
- **PIN RELEASE**: Pin extends, pin fingers retract.
- **SENSOR 1 ON**: Pin & pin fingers retracted.

**STEP 4A: PIN RETRACT**
- **SECONDARY CYLINDER**: Extend port energized.
- **POST SENSOR ON**: Part released.

**STEP 4B: PART RELEASE**
- **SECONDARY CYLINDER**: Retract port energized.
WORLD SWITCH ASSEMBLY

0  NONE

A  DC TURCK 4-PIN (PNP)
   #Ni2-Q6.5-AP6-0.1-FS 4.4x3/S304

B  AC/DC TURCK 5-PIN (N.O.)
   #Ni2-Q6.5-ADZ32-0.1-FSB 5.4x4/S304

C  DC TURCK 4-PIN (NPN)
   #Ni2-Q6.5-AN6-0.1-FS 4.4x3/S304

D  DC PEPPERL & FUCHS 4-PIN (PNP)
   #NBN2-F581-100S6-E8-V1

E  DC BALLUFF 4-PIN (PNP)
   #BES-Z02KR2-PSC20F-P100-S04

J  DC EFECTOR 4-PIN (PNP)
   #IN5374

Z  *DC WELKER 4-PIN (PNP)
   #WWS001A

*STANDARD SWITCH PRICING
OTHER SWITCHES MAY REQUIRE PRICING PREMIUM

SENSOR POSITION

0  NONE

E  Sensor 01-Unclamped (Pin Extended, Load/Unload Position)
   Sensor 02-Clamped (Pin Retracted)

R  Sensor 01-Clamped (Pin Retracted)
   Sensor 02-Unclamped (Load/Unload Position)

Note: Sensor 01 displays an amber LED. Sensor 02 displays a red LED

PCS WITH RETRACT OPTION
AND WORLD SWITCH

PIN RETRACT OPTION

WORLD SWITCH

CUSTOMER SUPPLIED
M12x1 PROX SWITCH FOR
RETRACT OPTION
WITH WORLD SWITCH

(DO NOT SCALE DRAWING)

WECKER
ENGINEERED PRODUCTS

800-229-0890 www.welkerproducts.com
### CYLINDER SWITCH INFORMATION

#### FOR PIN CLAMP ACTUATOR OPTION "B" & "D"

*(NOTE: Cylinder switches not available with actuator A on PCT)*

<table>
<thead>
<tr>
<th>Option</th>
<th>QTY</th>
<th>Switch Part #</th>
<th>Wire</th>
<th>Output</th>
<th>Mfg</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3</td>
<td>1</td>
<td>SWITCH L3**</td>
<td>4</td>
<td>PNP</td>
<td>Welker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dual sensor, single connector switch: 1 switch required per cylinder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L5</td>
<td>2</td>
<td>MK5113</td>
<td>3</td>
<td>NPN</td>
<td>ifm Efector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single sensor, single connector switch: 2 switches required per cylinder</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### FOR PIN CLAMP ACTUATOR OPTION "T"

<table>
<thead>
<tr>
<th>Option</th>
<th>QTY</th>
<th>Switch Part #</th>
<th>Wire</th>
<th>Output</th>
<th>Mfg</th>
</tr>
</thead>
<tbody>
<tr>
<td>L3</td>
<td>1</td>
<td>SWITCH L3S**</td>
<td>4</td>
<td>PNP</td>
<td>Welker</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single sensor, single connector switch: 1 switch required for retract cylinder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L5</td>
<td>3</td>
<td>MK5113</td>
<td>3</td>
<td>NPN</td>
<td>ifm Efector</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**L3 switch is weld field immune, comparable to World Switches**

*Standard Switch Option - All other options may affect price and delivery*

All switches are DC M12 X 1, Quick Disconnect

---

**PCM WITH ACTUATOR "T"**

AND L3 SWITCHES

**PCS WITH ACTUATOR "B"**

AND L3 SWITCH

---

(Do not scale drawing)
**Backup Options**

**Backup Diameter Range**

(1mm Increments)

<table>
<thead>
<tr>
<th>MIN</th>
<th>MAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>035</td>
<td>050</td>
</tr>
<tr>
<td>051</td>
<td>075</td>
</tr>
</tbody>
</table>

**Options**

- **A**: Standard Steel Backup
- **B**: Steel Long Backup
- **C**: Aluminum Bronze Backup
- **D**: Aluminum Bronze Long Backup

**Backup Distance**

- **OPTION "K"**: 14mm (for Clamping Range: 0.1 - 4mm)
- **OPTION "N"**: 17mm (for Clamping Range: 4.1 - 7mm)

**Note:** Locating pin retracts to actuate clamp fingers. Clamp fingers are extending during the first 10mm of pin travel and then travels linearly until clamped.

For special part clamp ranges, contact Welker

**Backup Dimensions for Diameters Less Than the Minimum Shown**

Example: To order a "C" series with ø18.85 pin and a ø25.0 backup touching the part, using the above order number, order #C1885AAARD025KA

**Standard Backup Distances**

- **OPTION "N"** (STD) FOR 17.0 BACKUP DISTANCE FOR PART THICKNESSES 4.0MM - 7.0MM
- **OPTION "K"** (STD) FOR 14.0 BACKUP DISTANCE FOR PART THICKNESSES 0.1MM - 4.0MM

114 STD HGT "C" & "T" SERIES
125 STD HGT "M" SERIES (OPTIONS A & C)

189 LONG HT "C" & "T" SERIES
200 LONG HT "M" SERIES (OPTIONS "B" & "D")

**See Sheet 14 for Replacement Pin Cartridge & Backup Ordering Information**
PIN CLAMP DESIGN GUIDELINES

1. FOR HORIZONTAL APPLICATIONS, ORIENTATION OF THE CLAMP FINGER MOVEMENT SHOULD BE PARALLEL TO THE GROUND FOR ROUND HOLES. SEE GENERAL DIMENSION SHEET FOR MAXIMUM SIDE LOADS.

2. PROXIMITY OF SOME WELD APPLICATIONS TO THE PIN CLAMP COULD AFFECT THE LIFE OF THE PIN AND CLAMP FINGERS.

3. IMPACT LOADING AND EXCESSIVE SIDE LOADING MUST BE AVOIDED. FOR ROBOTICS AND HARD AUTOMATION APPLICATIONS, THE LOCATING PINS NEED TO ENGAGE AND DISENGAGE AT LOAD AND UNLOAD.

4. WELKER ENGINEERED PRODUCTS DOES NOT RECOMMEND MORE THAN ONE 4-WAY AND ONE 2-WAY LOCATING DEVICE IN A COMMON GEO SETTING APPLICATION. PIN BIND AND EXCESSIVE SIDE LOAD MAY RESULT. IF A GEO SETTING APPLICATION REQUIRES MULTIPLE LOCATING DEVICES, CONTACT WELKER.

5. ALL PIN CLAMPS ARE DESIGNED TO BE OPERABLE UP TO 110 psi MAX.

6. PIN CLAMP PNEUMATIC ACTUATORS HAVE INTEGRATED FLOW RESTRICTIVE ORIFICES. FLOW CONTROLS ARE NOT REQUIRED.

WARRANTY

WELKER ENGINEERED PRODUCTS WARRANTS TO ITS CUSTOMERS PURCHASING PIN CLAMPS MANUFACTURED BY WELKER THAT THESE UNITS ARE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS. WELKER WARRANTS IT WILL REPAIR DEFECTS IN ITS MANUFACTURE DETERMINED BY WELKER TO HAVE OCCURRED AS A RESULT OF DEFECTIVE WORKMANSHIP AND /OR MATERIALS. THIS WARRANTY AUTOMATICALLY EXPIRES AT THE EARLIER OF THREE YEARS FROM THE DATE OF WELKER BEARING’S SHIPMENT OF THE PRODUCTS TO ITS CUSTOMER, OR THREE MILLION CYCLES. THE AFOREMENTIONED WARRANTY SHALL NOT APPLY IF WELKER DETERMINES THE PIN CLAMP(S) WERE MISAPPLIED, ABUSED, OR MODIFIED BY THE CUSTOMER. WITH THE EXCEPTION OF THE THREE YEAR OR THREE MILLION CYCLE WARRANTY ON DEFECTIVE WORKMANSHIP AND MATERIALS, WELKER BEARING MAKES NO EXPRESS WARRANTY, NO WARRANTY OF MERCHANTABILITY, NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND NO WARRANTY WHICH EXTENDS BEYOND THIS WRITING ON WELKER MANUFACTURED PIN CLAMPS SOLD BY WELKER BEARING.

LOCATING PINS AND CLAMP FINGERS ARE CONSIDERED WEAR ITEMS AND AS SUCH ARE NOT INCLUDED IN THIS WARRANTY UNLESS THERE IS A MANUFACTURING DEFECT AS STATED ABOVE.

UNDER NO CIRCUMSTANCES SHALL WELKER BEARING BE LIABLE TO ANYONE FOR INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, SPECIAL OR PUNITIVE DAMAGES WHETHER DIRECT OR INDIRECT, INCLUDING, BUT NOT LIMITED TO DOWN TIME, ARISING OUT OF OR RELATED TO ANY PRODUCTS SOLD OR MANUFACTURED BY WELKER ENGINEERED PRODUCTS.

ANY PRODUCT THOUGHT TO BE DEFECTIVE IN WORKMANSHIP OR MATERIALS MUST BE RETURNED TO WELKER FREIGHT PREPAID FOR EVALUATION. WELKER SHALL NOT BE LIABLE FOR LABOR COST INCURRED IN THE REMOVAL OF A PART, DEFECTIVE PART OR THE INSTALLATION OF ANY REPLACEMENT PART.

ALL PNEUMATIC PIN CLAMPS ARE SHIPPED WITH INTERNAL OR EXTERNAL FLOW RESTRICTORS. IF THESE RESTRICTORS ARE REMOVED OR BYPASSED, THE WARRANTY IS VOID.
**REPLACEMENT PIN CLAMP CARTRIDGES**

SEE SHEET 5 FOR PIN TYPES AND FINGER ORIENTATION

<table>
<thead>
<tr>
<th>Series</th>
<th>Options</th>
<th>Backup</th>
<th>Code Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>PCT Body</td>
<td>Std</td>
<td>CE06C-16.00-035-K-A</td>
</tr>
<tr>
<td>C</td>
<td>PCS Body</td>
<td>Long</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>PCM Body</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Series**
- **T** PCT Body
- **C** PCS Body
- **M** PCM Body

**Pin Diameter**
- 12.00-16.00 T Series
- 16.01-25.00 C Series
- 25.01-40.00 M Series

*Pin diameter to 2 decimal places

**Pin Type**
- **A** Bullet Nose Pin w/ fingers at 0°
- **B** Bullet Nose Pin w/ fingers at 90°
- **C** Bullet Nose 2-way Pin w/ fingers @ 0° **
- **D** Bullet Nose 2-way Pin w/ fingers @ 90° **
- **E** Low Profile Pin w/ fingers at 0°
- **F** Low Profile Pin w/ fingers at 90°
- **G** Low Profile 2-Way Pin w/ fingers @ 0° **
- **H** Low Profile 2-Way Pin w/ fingers @ 90° **

**Backup**
- **K** 14mm (for clamping range 0.1 - 4mm)
- **N** 17mm (for clamping range 4.1 - 7mm)

**Cartridge ordering examples:**
- C-CRT-16.00-A-STD
- M-CRT-40.00-B-LONG
- C-CRT-19.00-A-STD-T

**REPLACEMENT BACKUP**

ALL BACKUPS INCLUDE A BACKUP, BACKUP RING WITH SEAL, SPACER & HARDWARE
SEE SHEET 12 FOR BACKUP OPTIONS

<table>
<thead>
<tr>
<th>Series</th>
<th>Options</th>
<th>Backup</th>
<th>Code Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>A &amp; C</td>
<td>STD</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>B &amp; D</td>
<td>LONG</td>
<td></td>
</tr>
</tbody>
</table>

**Series**
- **T** PCT Body
- **C** PCS Body
- **M** PCM Body

**Pin Diameter**
- 12.00-16.00 T Series
- 16.01-25.00 C Series
- 25.01-40.00 M Series

*Pin diameter to 2 decimal places

**Backup Diameter**
- 035-050 (Ø35-Ø50mm) C & T Series
- 051-075 (Ø51-Ø75mm) M Series

**Backup Distance**
- **K** 14mm (for clamping range 0.1 - 4mm)
- **N** 17mm (for clamping range 4.1 - 7mm)

Backup ordering example:
CE06C-16.00-035-K-A

(SEE SHEET 5 FOR PIN TYPES AND FINGER ORIENTATION)
(SEE SHEET 12 FOR BACKUP OPTIONS)

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(SHEET 14)