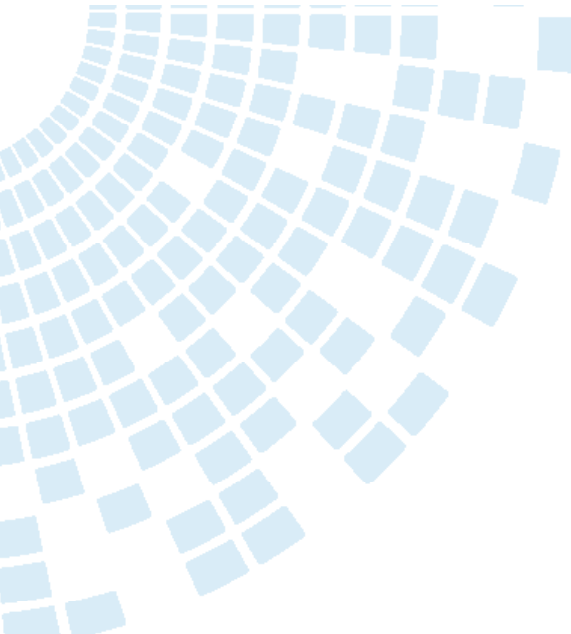




Dura-Con™

## Dura-Con™ Hermetic Connectors

Standard Connectors With  
High Performance Hermetic Seals Catalog



[belfuse.com/cinch](http://belfuse.com/cinch)

# Cinch Dura-Con™ Hermetic Connectors offers a high performance hermetic seal designed into our standard Dura-Con™ Connector

## Features

- Both Plug and Socket available in 9, 15, 21, 25, 31, 37 and 51 positions
- Aluminium shell provides extra strength and EMI/RFI shielding capability
- Rugged twist-pin contacts resistant to shock and vibration make metal shell Dura-Con™ an excellent choice for harsh environments
- Hermetic seal achieved through Cinch Hermetic compound
- Tested to Mil-DTL-83513
- Pigtail and Solder Cup variations only

## Electrical

- Current Rating: 3 Amps maximum
- Withstanding Voltage: 600 VAC RMS @ sea level
- Contact Resistance: 8 milliohms maximum

## Materials

- Insulator: UL94V-0 rated glass-filled polyester or diallyl phthalate
- Contacts: Pins - Copper alloy, sockets - Copper alloy (machined)
- Contact Plating: 1.27 micron gold as per Mil-G-4204
- Shell: Aluminium alloy
- Shell Plating: Electroless nickel and cadmium
- Hermetic Seal: Cinch Hermetic compound
- Sealing: Fluoro Silicone 'O' ring seal

## Environmental

- Operating Temperature: -55°C to +125°C
- Hermetic Seal: 1 x 10<sup>-8</sup>cc/sec @ 1 Atmosphere Helium

## Mechanical

- Individual Contact: 6 oz. (170.40g) maximum insertion force 0.5 oz. (14.20g) minimum withdrawal

## Connector Performance Specifications

| Property                                                                    | Requirement                           | Test Method                             |
|-----------------------------------------------------------------------------|---------------------------------------|-----------------------------------------|
| <b>Current Rating</b>                                                       | 3 Amp maximum                         |                                         |
| <b>Dielectric Withstanding Voltage Sea level</b>                            | 900 VAC                               | Mil-STD-1344, Method 3001               |
| <b>Contact Resistance</b>                                                   | 8 milliohms maximum                   | Mil-STD-202, Method 307                 |
| <b>Low Level Contact resistance</b>                                         | 32 milliohms maximum                  | Mil-STD-1344, Method 3002               |
| <b>Insulation Resistance</b>                                                | 5000 megohms minimum                  | Mil-STD-1344, Method 3003               |
| <b>Magnetic Permeability</b>                                                | 2.0 µmaximum                          | ASTM A342                               |
| <b>Mating Force</b>                                                         | (10 ounces max.) x (# of contacts)    | Mil-DTL-83513                           |
| <b>Unmating Force</b>                                                       | 0.5 ounces min.) x (# of contacts)    | Mil-DTL-83513                           |
| <b>Contact Retention</b>                                                    | 5 pounds minimum                      | Mil-STD-1344, Method 2007               |
| <b>Operating Temperature</b>                                                | -55°C. to 125°C.                      |                                         |
| <b>Durability</b>                                                           | 500 mating cycles minimum             | Mil-DTL-83515, Para 4.5.16              |
| <b>Salt Spray (corrosion)</b>                                               | 48 hours                              | Mil-DTL-1344, Method 2004, Condition E  |
| <b>Crimp Tensile Strength</b><br>Wire Type M22759/11<br>Wire Type M22759/33 | 5 pounds minimum<br>10 pounds minimum | Mil-DTL-83513, Para 4.5.20              |
| <b>Shock</b>                                                                | 50 G's                                | Mil-STD-1344, Method 2004, Condition E  |
| <b>Vibration</b>                                                            | 20 G's                                | Mil-STD-1344, Method 2005, Condition IV |
| <b>Minimum Hermetic Leakage Rate</b>                                        | 1 x 10 <sup>-8</sup> mbar 1/s         |                                         |
| <b>Moisture Permeation</b>                                                  | 0.5% in 168 hrs                       |                                         |

## Mating Unmating Force

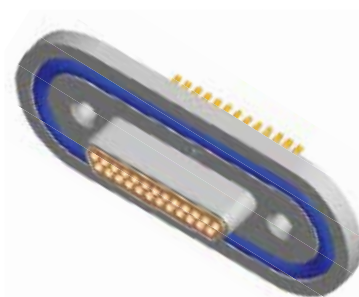
| No. of Contacts        | 9        | 15       | 21        | 25        | 31        | 37        | 51        | 100       |
|------------------------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Maximum Mating Force   | 5.63 lbs | 9.38 lbs | 13.13 lbs | 15.63 lbs | 19.38 lbs | 23.13 lbs | 31.88 lbs | 62.50 lbs |
|                        | 2.56 kg  | 4.26 kg  | 5.96 kg   | 7.10 kg   | 8.80 kg   | 10.50 kg  | 14.47 kg  | 28.38 kg  |
| Minimum Unmating Force | 0.28 lbs | 0.47 lbs | 0.66 lbs  | 0.78 lbs  | 0.97 lbs  | 1.16 lbs  | 1.59 lbs  | 3.13 lbs  |
|                        | 0.13 kg  | 0.21 kg  | 0.30 kg   | 0.35 kg   | 0.44 kg   | 0.53 kg   | 0.72 kg   | 1.42 kg   |

## DURA-CON™ METAL SHELL

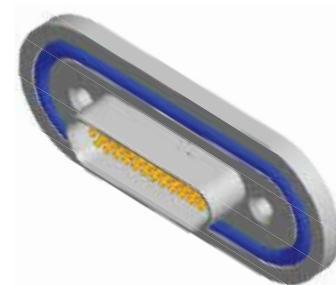
Connector Dimensions - Mating view of pin insert. (Use reverse order for socket side)

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## Plug Arrangement



## Socket Arrangement



| No. of<br>Contacts | A<br>Max.                    |        | B<br>± 0.25 (0.010") |        | C<br>± 0.127 (0.005") |        | D<br>± 0.20 (0.008") |        | E<br>± 0.20 (0.008") |        | F<br>± 0.20 (0.008") |        |
|--------------------|------------------------------|--------|----------------------|--------|-----------------------|--------|----------------------|--------|----------------------|--------|----------------------|--------|
|                    | mm                           | inches | mm                   | inches | mm                    | inches | mm                   | inches | mm                   | inches | mm                   | inches |
| 9 Plug             | 8.4                          | 0.333  | 19.65                | 0.774  | 14.35                 | 0.565  | 31.68                | 1.247  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 9 Socket           | 10.06                        | 0.396  | 19.65                | 0.774  | 14.35                 | 0.565  | 31.68                | 1.247  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 15 Plug            | 12.27                        | 0.483  | 23.45                | 0.923  | 18.16                 | 0.715  | 34.16                | 1.345  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 15 Socket          | 13.87                        | 0.546  | 23.45                | 0.923  | 18.16                 | 0.715  | 34.16                | 1.345  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 21 Plug            | 16.08                        | 0.633  | 27.25                | 1.073  | 21.97                 | 0.865  | 39.15                | 1.541  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 21 Socket          | 17.68                        | 0.696  | 27.25                | 1.073  | 21.97                 | 0.865  | 39.15                | 1.541  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 25 Plug            | 18.62                        | 0.733  | 29.85                | 1.175  | 24.51                 | 0.965  | 41.66                | 1.640  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 25 Socket          | 20.22                        | 0.796  | 29.85                | 1.175  | 24.51                 | 0.965  | 41.66                | 1.640  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 31 Plug            | 21.16                        | 0.883  | 33.65                | 1.325  | 28.32                 | 1.115  | 44.13                | 1.737  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 31 Socket          | 24.03                        | 0.946  | 33.65                | 1.325  | 28.32                 | 1.115  | 44.13                | 1.737  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 37 Plug            | 26.24                        | 1.033  | 37.45                | 1.474  | 32.13                 | 1.265  | 49.12                | 1.934  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 37 Socket          | 27.84                        | 1.096  | 37.45                | 1.474  | 32.13                 | 1.265  | 49.12                | 1.934  | 17.00                | 0.670  | 7.50                 | 0.295  |
| 51 Plug            | 24.97                        | 0.983  | 36.15                | 1.423  | 30.86                 | 1.215  | 48.50                | 1.909  | 18.10                | 0.713  | 8.60                 | 0.339  |
| 51 Socket          | 26.57                        | 1.046  | 36.15                | 1.423  | 30.86                 | 1.215  | 48.50                | 1.909  | 18.10                | 0.713  | 8.60                 | 0.339  |
| 100 Plug           | Consult Cinch Connectors Ltd |        |                      |        |                       |        |                      |        |                      |        |                      |        |
| 100 Socket         | Consult Cinch Connectors Ltd |        |                      |        |                       |        |                      |        |                      |        |                      |        |

Mating view of pin insert. (Use reverse order for socket side) - 9 to 51 Way only

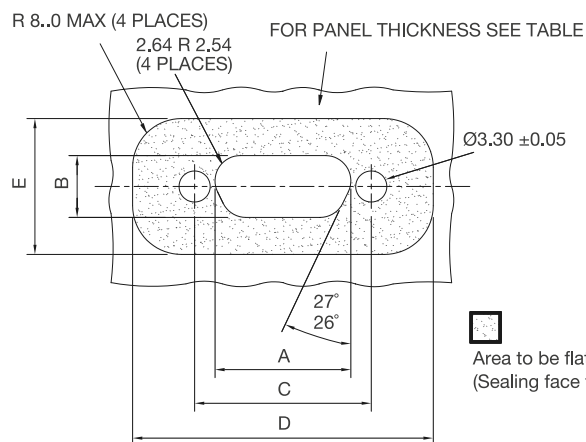
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into jackpost, 0.23 Nm / 0.28 Nm (2/2.5 in. lb)

| Jackpost<br>Part Number | Panel Thickness |        | A         |             | B   |        |
|-------------------------|-----------------|--------|-----------|-------------|-----|--------|
|                         | mm              | inches | mm        | inches      | mm  | inches |
| DN00008 08              | 0.8             | 0.031  | 0.65/0.60 | 0.026/0.024 | 4.6 | 0.181  |
| DN00008 12              | 1.2             | 0.047  | 1.05/1.00 | 0.041/0.039 | 5.0 | 0.197  |
| DN00008 16              | 1.6             | 0.063  | 1.45/1.40 | 0.057/0.055 | 5.4 | 0.213  |
| DN00008 24              | 2.4             | 0.094  | 2.25/2.20 | 0.089/0.087 | 6.2 | 0.244  |



| Jackpost<br>Part Number | Panel Thickness.<br>±0.05 (.002) |        |
|-------------------------|----------------------------------|--------|
|                         | mm                               | inches |
| DN00008 08              | 0.7                              | 0.028  |
| DN00008 12              | 1.1                              | 0.043  |
| DN00008 16              | 1.5                              | 0.059  |
| DN00008 24              | 2.3                              | 0.091  |



Area to be flat, smooth and free from tool marks, blemishes etc.  
(Sealing face for 'O' ring)

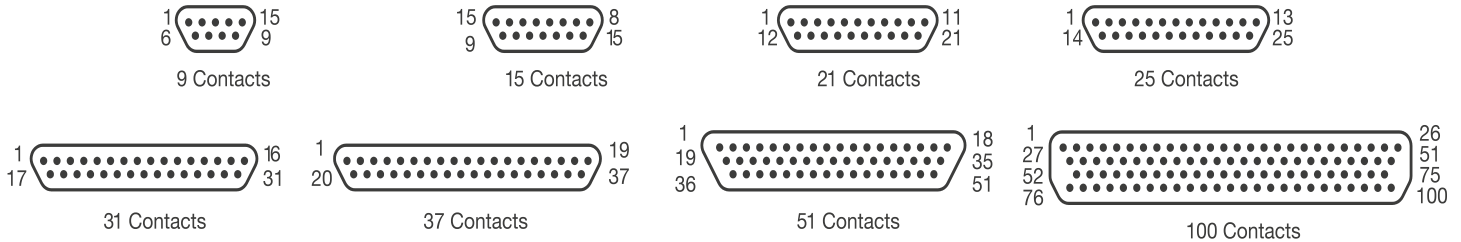
| No. Ways | A<br>+.10 (.004)             |        | B<br>+.10 (.004) |        | C<br>±0.05 (.002) |        | D<br>(MIN) |        | E<br>(MIN) |        |
|----------|------------------------------|--------|------------------|--------|-------------------|--------|------------|--------|------------|--------|
|          | mm                           | inches | mm               | inches | mm                | inches | mm         | inches | mm         | inches |
| 9        | 10.11                        | 0.398  | 6.32             | 0.249  | 14.35             | 0.565  | 35.0       | 1.378  | 20.0       | 0.787  |
| 15       | 13.92                        | 0.548  | 6.32             | 0.249  | 18.16             | 0.715  | 37.0       | 1.457  | 20.0       | 0.787  |
| 21       | 17.73                        | 0.698  | 6.32             | 0.249  | 21.97             | 0.865  | 42.0       | 1.654  | 20.0       | 0.787  |
| 25       | 20.27                        | 0.798  | 6.32             | 0.249  | 24.51             | 0.965  | 45.0       | 1.772  | 20.0       | 0.787  |
| 31       | 24.08                        | 0.948  | 6.32             | 0.249  | 28.34             | 1.116  | 47.0       | 1.850  | 20.0       | 0.787  |
| 37       | 27.89                        | 1.098  | 6.32             | 0.249  | 32.13             | 1.265  | 52.0       | 2.047  | 20.0       | 0.787  |
| 51       | 26.62                        | 1.048  | 7.42             | 0.292  | 30.86             | 1.215  | 52.0       | 2.047  | 22.0       | 0.866  |
| 100      | Consult Cinch Connectors Ltd |        |                  |        |                   |        |            |        |            |        |

# HOW TO ORDER

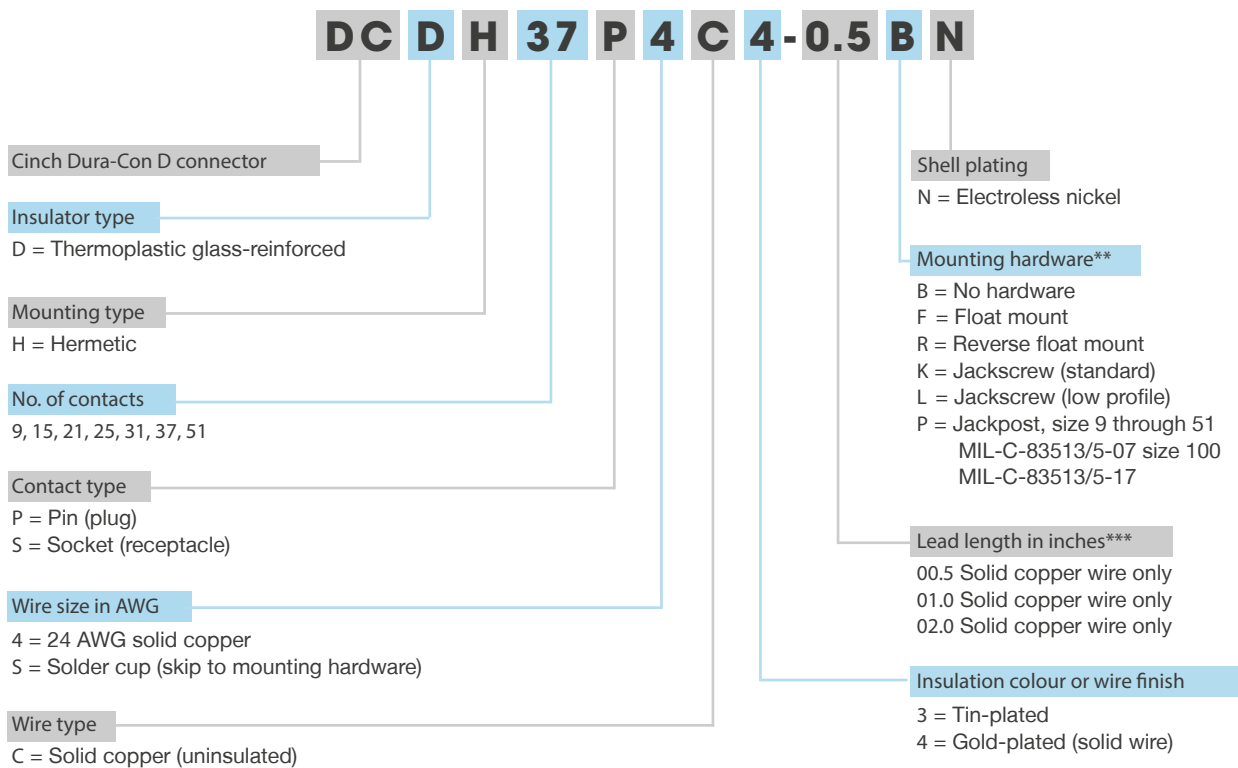
Mating view of pin insert. (Use reverse order for socket side)

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## Contact Arrangements



## Ordering Information



# ENGINEER'S CHECK LIST

# Dura-Con™



## SECTOR

- ☐ Sea
- ☐ Aerospace
- ☐ Sub-Terrain
- ☐ Ground Support
- ☐ Armoured Vehicle
- ☐ Rail
- ☐ Space
- ☐ Radar
- ☐ Avionics
- ☐ Munitions / Missile

## CONNECTOR STYLE

- ☐ Rectangular
- ☐ Circular
- ☐ Z Axis Compression
- ☐ Power & Signal
- ☐ Hermetic
- ☐ IPC Rated
- ☐ Filtered
- ☐ Edge Connector
- ☐ Multipole
- ☐ High Speed
- ☐ Rugged Enclosure

## CONSTRUCTION

- ☐ Male
- ☐ Female
- ☐ Crimp
- ☐ Solder
- ☐ PC Tail
- ☐ 90°
- ☐ 180°
- ☐ RF Signals
- ☐ Number Contact Points
- ☐ Contact Pitch
- ☐ Housing Material
- ☐ Plastic
- ☐ Metal

## ENVIRONMENT

- ☐ Dust
- ☐ Moisture Resistant
- ☐ Full Water Immersion
- ☐ Chemical Compatibility RoHS
- ☐ Low Smoke / Zero Halogen
- ☐ Extreme Temperature
- ☐ Tolerance
- ☐ Flame Retardant

## MARKET SEGMENT

- ☐ Oil Petroleum Gas (OPG)
- ☐ Renewable Energy
- ☐ Military & Defence
- ☐ Commercial
- ☐ Computer
- ☐ Industrial
- ☐ Telecommunications
- ☐ Medical

## CUSTOM INTERCONNECT

- ☐ Single Ended
- ☐ Double Ended
- ☐ Multi Limb Cable Assembly
- ☐ Strain Relief Backshell
- ☐ Environmental Backshell / Boot
- ☐ 3600 Screened Backshell
- ☐ Moulded Strain Relief
- ☐ Woven
- ☐ Flexible Circuit

## SPECIFICATION

- ☐ Operating Temperature
- ☐ Range
- ☐ Mating Cycles
- ☐ Electrical
- ☐ Voltage Rating
- ☐ Current Rating
- ☐ Filtration Rating
- ☐ Materials / Finish
- ☐ Contact Plating
- ☐ Housing Plating

## WIRE TYPE

- ☐ Stranded
- ☐ Solid
- ☐ Twisted pairs
- ☐ Co-Axial
- ☐ Colour Code Single / Multi
- ☐ Multi Core
- ☐ Shielded
- ☐ Wire AWG
- ☐ Custom Cable

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### Офис по работе с юридическими лицами:

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