

## **Jewel**® **ELASTIC ADJUSTABLE** WRIST STRAPS

09100 Wrist Strap, 6' Cord, Sapphire Wrist Strap, 6' Cord, Ruby Wrist Strap, 6' Cord, Topaz 09102 09103 Wrist Strap, 6' Cord, Emerald 09104 Wrist Strap, 6' Cord, Amethyst 09110 Wrist Strap, 10' Cord, Sapphire 09130 Wristband Only, Sapphire 09105 Wristband Only, Ruby 09106 Wristband Only, Topaz 09107 09108 Wristband Only, Emerald 09109 Wristband Only, Amethyst 09140 Replacement Elastic Strip

09100 09102 09103 09104 999 9999 Drawings: 09105, 09150 **Technical Bulletin TB-2005** 9991 9911 Listing #90P1

· High visibility

Bright colors allow supervisor to see that worker is wearing wrist strap

Patented\* contoured spring supported banana plug Ensures reliable path-to-ground connection expanding banana plug into socket

Solid stainless steel wrist band stud machined to exacting tolerances and precise profile

Ensures reliable path-to-ground connection to spring loaded 4mm stainless steel constant contact coil cord snap

- Lifetime warranty on our wrist band stud If damaged during normal use, will provide no-charge replacement
- Durable, lightweight fabric Some users prefer the softness, comfort and flexibility of this material

Made in America

For detailed information on all **Desco wrist straps:** www.desco.com/catalog

#### PREMIUM METAL EXPANSION WRIST STRAPS

09041 Band Only

09042 Band Only Extra Large 09085 Band with 6' Coil Cord

91070 Band with 6' Coil Cord & Angle Banana

 Premium metal expansion wrist strap Comfortable, designed not to pinch or pull hair

Patented\* contoured spring supported banana plug Ensures reliable path-to-ground connection expanding banana plug into socket

· Solid stainless steel wrist band stud machined to exacting tolerances and precise profile

Ensures reliable path-to-ground connection to spring loaded 4mm stainless steel constant contact coil cord snap

Superior contact with skin For reliable removal of generated static charges

Adjustment band changes quickly and easily to any size One size fits all; only one item number to purchase and stock -

no "extra" links to lose Made in America

Circumference - Regular: 5.5" - 13", Extra large: 6.25" - 14.5"

Drawings 09041, 09480, and 91095, Technical Bulletin TB-2005

NOTE: All bands on this page have a 4mm snap stud. Wrist strap kits include an alligator clip (excluding right angle products).

\*US Patent 5951337

ANSI/ESD S20.20 Paragraph 6.2.2.1 Personnel Grounding Requirement "All personnel shall be bonded or electrically connected to ground or contrived ground when handling ESD sensitive items. When personnel are seated at ESD protective workstations, they shall be connected to the common point ground via a wrist strap system.'

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09044 Band Only, Medium 09043 Band Only, Large 09088 Band with 6' Coil Cord, Small

09087 Band with 6' Coil Cord, Medium Band with 6' Coil Cord, Large 09086

Drawings 09043 and 09480





09085



#### ELASTIC ADJUSTABLE WRIST STRAPS

Band Only 09028

09070 Band with 6' Black Coil Cord 09069 Band with 12' Black Coil Cord 09029 Elastic Replacement Strip 09031 Replacement Clasp Only

- · Extra wide, soft elastic band Increased wearer comfort
- Has silver impregnated nylon knitted on inside for superior conductivity

Reliably removes generated static charges

Adjustable

Only one item to stock; may be fitted to almost all people

Locking clasp

Band locked so it will not slip

Made in America

Circumference - 2.5" - 13"

Drawings 09028, 09480, and 14010, Technical Bulletin TB-2005

#### LIGHTWEIGHT ELASTIC ADJUSTABLE WRIST STRAPS

Band with 6' Coil Cord 14830 Band with 10' Coil Cord

14840 Band Only

· Durable, lightweight fabric Some users prefer the softness, comfort and flexibility of this material

· Has silver impregnated nylon knitted on inside for superior conductivity Reliably removes generated static charges

Adjustable

Only one item to stock; may be fitted to almost all people

- Unique patented (US Patent 4,662,695) adjustment design eliminates exposed conductive "tail" of band Provides added safety, eliminating chance of providing inappropriate ground path
- Made in America

Circumference - 2.5" - 14"

Drawings 14810 and 14010, Technical Bulletin TB-2005

#### **HOOK & LOOP WRIST STRAPS**

09060 Band Only

Band with 6' Coil Cord 09078

· Non reactive, anti-microbial, anti-bacterial medical grade conductive strip

Reduces growth of mold, mildew, and fungus; the best choice for users with ultra sensitive skin

- Return loop, quick, easy adjustment mechanism One size fits all; only one item to purchase and stock
- Sewn inner conductive surface with no exposed conductive materials on exterior Provides added safety eliminating chance of providing
- inappropriate ground path Molded plastic cover Provides stable base for cord attachment
- Made in America

Listing #90P1

Drawings 09060 and 09480, Technical Bulletin TB-2005

NOTE: All bands on this page have a 4mm snap stud. Complete wrist strap kits include an alligator clip.





#### **ELASTIC ADJUSTABLE DUAL-WIRE WRIST STRAPS**

19691 Wristband, 4mm male snaps

19690 Wristband, 4mm male snaps, with 6' Snap-One Coil Cord, 4mm female snaps, right angle mono plug

19851 Wristband, 4mm male snaps, with 12' Snap-One Coil Cord, 4mm female snaps, right angle mono plug

19861 Wristband, 7mm female snaps

19860 Wristband, 7mm female snaps, with 6' Dual-snap Coil Cord, 7mm male snaps, right angle mono plug

· Use patented (6,052,053 and 6,205,408) Dual Wire Wrist Strap with Desco Dual Wire Continuous Monitor

Dual Wire Wrist Strap provides redundancy; even if one dual wire wrist strap conductor is severed, operator has reliable path-to-ground with other wire

 Comfortable adjustable wrist band Made of silver suffused monofilament conductive interior

· 4mm snaps are machined to precision profile from 300 series stainless steel for a consistent and reliable connection.

· 7mm snaps are stamped

Drawing 19691

For detailed information on all Desco wrist straps and coil cords:

www.desco.com/catalog

19855



Wristband Only, 4mm male snaps, small 19842 Wristband Only, 4mm male snaps, medium 19840 Wristband Only, 4mm male snaps, large 19854 Wristband Only, 7mm female snaps, small 19855 Wristband Only, 7mm female snaps, medium 19856 Wristband Only, 7mm female snaps, large

19859 Wristband, 4mm male snaps, small, with Snap-One 6' Coil Cord, 4mm female snaps, right angle mono plug

Wristband, 4mm male snaps, medium, with Snap-One 6' Coil 19858

Cord, 4mm female snaps, right angle mono plug

19857 Wristband, 4mm male snaps, large, with Snap-One 6' Coil Cord,

4mm female snaps, right angle mono plug

 Use patented (6,052,053 and 6,205,408) Dual Wire Wrist Strap with Desco Dual Wire Continuous Monitor

Dual Wire Wrist Strap provides redundancy; even if one dual wire wrist strap conductor is severed, operator has reliable path-to-ground with other wire

 300 series stainless steel backplate (0.015" thick) Manufacturing date code is stamped into stainless steel back plate

 Premium metal expansion wristband Inside links are constructed of 300 Series Stainless Steel. Width of links is 0.630"

Drawings 19840, 19854

### VINYL DISPOSABLE WRIST STRAPS

14401 Disposable Wrist Strap

 Designed for one time use Perfect for guests, field service calls, or to be shipped with ESD sensitive products

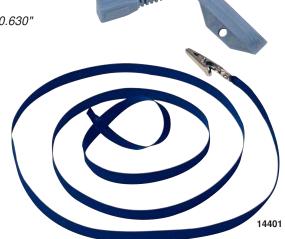
· Packaged individually in a printed bag with instructions Ready to pack with your ESD sensitive products ensuring that when opened, the information and means are provided to continue protecting your ESD sensitive product

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· Made in America

Note: 35.5" long, mini alligator clip included

Drawing 14401





19690

19858



# **Jewel**®

#### RAPID RETRACTION COIL CORDS

Coil Cord, 6', Sapphire Coil Cord, 6', Ruby Coil Cord, 6', Topaz Coil Cord, 6', Emerald 09122 09124 09126 09128 Coil Cord, 6', Amethyst 09121 Coil Cord, 10', Sapphire 09150

Coil Cord, Right Angle, 6', Sapphire Coil Cord, Right Angle, 10', Sapphire 09151

· High visibility

Bright colors allow supervisor to see that worker is wearing wrist strap

Superior strain relief tests in excess of 50,000,000 cycles per ESD S1.1 - See Bending Life Test (exceeds by over 3,100 times the minimum requirement) Eliminates intermittent failures that occur with less durable single and dual wire cords

Patented\* contoured spring supported banana plug Ensures reliable path-to-ground connection expanding banana plug into socket

Rapid retraction strength polyurethane coil cords Provides high memory and less coil cord dragging on work surface

· Made in America

Drawings: 09120, 09150, Technical Bulletin TB-2005

#### RELAXED RETRACTION COIL CORDS

Coil Cord, 6', Black Coil Cord, 12', Black Coil Cord, 20', Black 09480 09680 09682

Coil Cord, Right Angle, 6', Black 91095 14113 Coil Cord, Banana-Banana, 12', Black Coil Cord, Banana-Banana, 20', Black 14114

Relaxed retraction strength black PVC More comfortable; will not interfere with wearer's movements

Superior strain relief tests in excess of 1,000,000 cycles, per ESD S1.1 - See Bending Life Test (exceeds by over 62 times the minimum requirement)

Eliminates intermittent failures that occur with less durable single and dual wire cords

· Improved snap design Stronger strain relief and snap retention for long life; low profile keeps cord from being disconnected

Banana plug molded at 90° on item 91095, creating low

Cords are less likely to be accidentally pulled out, eliminating time where a damaging static discharge event might occur

Banana plugs on both ends of coil cord on items 14113 and 14114

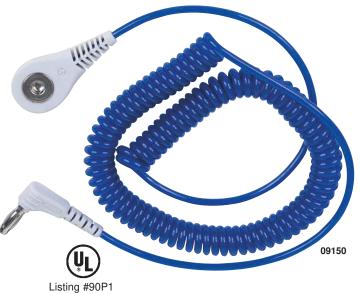
Allows cart users to ground carts to common grounding point on bench

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#### Drawings 09480, 91095, and 14113, Technical Bulletin TB-2005

glance, the ground cord appears to be a relatively simple assembly. However, the design requirements are considerable, given the wide range of user applications and the durability requirements of constant tugging, flexing, and dragging over the edge of workstation tops and equipment chassis.

Per ESD Handbook TR20.20 paragraph 5.3.2.2.2 Wrist Strap Ground Cord, "At first









See our products being Made in America on our web site: www.desco.com/factory \*US Patent 5951337



### DUAL WIRE SNAP-ONE™ COIL CORD WITH RIGHT ANGLE MONO PLUG

6' Coil Cord, 4mm female snaps, right angle mono plug 19696 12' Coil Cord, 4mm female snaps, right angle mono plug 19866 18' Coil Cord, 4mm female snaps, right angle mono plug

· Dual Wire Coil Cord provides redundancy; even if one conductor is severed, operator has reliable path-to-ground with other wire Used with resistive loop technology continuous monitor, continuously verifies the proper resistance to ground of the operator

· Coil cord with molded 1 Megohm current limiting resistor on both ground paths Protects user from shock due to inadvertent contact with line voltage

 Single (Snap-One™) snap head Allows operators to quickly and easily attach and detach the cord from the wristband

 Park-it feature on Snap-One™ molded snap head Provides convenient park station for cord when not in use. Simply insert phono plug into hole to allow for hanging cord at workbench

Drawing 19695

#### DUAL WIRE DUAL SNAP COIL CORD WITH RIGHT ANGLE MONO PLUG

6' Coil Cord, 4mm female snaps, right angle mono plug 19868 6' Coil Cord, 7mm male snaps, right angle mono plug 12' Coil Cord, 7mm male snaps, right angle mono plug 19863

- · Dual Wire Coil Cord provides redundancy; even if one conductor is severed, operator has reliable path-to-ground with other wire Used with resistive loop technology continuous monitor, continuously verifies the proper resistance to ground of the operator
- · Coil cord with molded 1 Megohm current limiting resistor on both ground paths Protects user from shock due to inadvertent contact with line voltage
- · Custom manufactured right angle mono-plug Reduces chance of accidental disconnects providing more secure ground connection

Drawing 19868

For detailed information on all Desco wrist straps and coil cords:

www.desco.com/catalog

For Dry Skin, Use Reztore™ Lotion to **Improve Contact** 

#### REZTORE™ ESD HAND LOTION

81080 8 oz. Bottle

1 qt. Bottle with Pump 81082 1 gal. Bottle with Pump

- · Dissipative formulation creates a superior path to ground Helps lower skin electrical resistance and eliminates annoying and time consuming dry skin wrist strap testing failures
- Special ESD formulation for the electronic manufacturing environment; will not insulate skin like regular lotions Helps provide reliable path-to-ground, protecting ESD susceptible product
- Non-contaminating and solder-safe; free of chemicals that may adversely affect solderability or cause corrosion of electronic components Reduces contamination that can cause solderability problems

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Made in America

**Technical Bulletin TB-3012** 





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19868