

STRAP WRENCHES



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DMC strap wrenches have been specifically designed for connector assembly, rather than merely adapted from another use. The combination of lightweight materials, torque sensitive threads, and critical platings on modern connectors has mandated the requirement for precision made strap-wrenches, which apply a uniform grip around the diameter and avoid pressure points or metal-to-metal contact.

A variety of widths and lengths of straps is available, in several different handle configurations, so the system is suited to all common connector applications.



STANDARD STRAP WRENCHES

TOOL TIP STYLE	WRENCH P/N	STRAP P/N	STRAP WIDTH (COLOR)	STRAP LOOPED	SUGGESTED GRIPPING DIAMETER
A	BT-BS-610	BT-A-6010	1/2" (Black)	Yes	.25" to 1.50"
	BT-BS-610B*	BT-A-6010B*	1/2" (Blue)	Yes	.25" to 1.50"
	BT-BS-610W	BT-A-6010W	1/2" (White)	Yes	.25" to 1.50"
	BT-BS-610R	BT-A-6010R	1/2" (Red)	Yes	.25" to 1.50"
B	BT-BS-609	BT-A-6010	1/2" (Black)	Yes	.50" to 2.50"
	BT-BS-609B*	BT-A-6010B*	1/2" (Blue)	Yes	.50" to 2.50"
	BT-BS-609W	BT-A-6010W	1/2" (White)	Yes	.50" to 2.50"
	BT-BS-609R	BT-A-6010R	1/2" (Red)	Yes	.50" to 2.50"
C	BT-BS-611	BT-A-6175	5/8" (Black)	Yes	1.00" to 4.00"
	BT-BS-611B*	BT-A-6175B*	5/8" (Blue)	Yes	1.00" to 4.00"
	BT-BS-611W	BT-A-6175W	5/8" (White)	Yes	1.00" to 4.00"
C	BT-BS-618	BT-A-6185	1" (Black)	Yes	1.00" to 4.00"
	BT-BS-618B*	BT-A-6185B*	1" (Blue)	Yes	1.00" to 4.00"
	BT-BS-618W	BT-A-6185W	1" (White)	Yes	1.00" to 4.00"
D	BT-BS-625	BT-A-6250	1/2" (Red)	Yes	.50" to 2.0"
	BT-BS-630	BT-A-6300	7/16" (Black)	Yes	.50" to 2.0"
E	The Handle-Less Strap Wrenches are presented on page 35.				

*The blue series strap wrench and replacement straps are preferred for connector/accessory use.

SEE TORQUE CONVERSION CHARTS ON PAGE 37 FOR USE OF STRAP WRENCHES IN COMBINATION WITH TORQUE TOOLS.



STRAPS

The straps for DMC Strap Wrenches are available in four styles (which are color coded for easy identification) to better meet the needs of individual applications.



The **Black Strap** is the traditional rubber strap for DMC strap wrenches. It is the most flexible and grip-friendly of all strap materials, but requires replacement more often than other strap constructions. It is good for all sizes, and flexible enough to grip smaller diameters (.25 to .75 inches). But the black strap is not recommended for high torque range tightening. It is available in looped and loopless configurations. Because of the shorter service life of this material, we recommend the loopless version so the user can make adjustments to compensate for wear or breakage.

The **Blue Strap** is made of a thin layer of extruded polyethylene over a nylon belt. This strap is the preferred choice for all general purpose connector and backshell tightening applications, and it has good service life at medium to high-medium torque ranges. The Blue Straps, although not as flexible and grip-friendly as the Black Rubber straps, are a good choice because of the increased durability. This strap will grip .75 inch diameters and larger, and is available in looped and loopless configurations.

The **Red Strap** is the same material and construction as the Blue Strap, but it is thicker and stronger for higher torque range tightening and increased durability. This heavy duty construction allows it to be used on smooth or knurled surfaces, and can be used to tighten fittings with 1.0 inch diameters and larger. It is available in looped and loopless versions.

The **White Strap** is a traditional hard rubber construction option that has a durable rubber surface on one side. It is used effectively where high strength is needed, but flexibility is not important. It is well suited to all diameters of 2.0 inches or larger. Due to its sturdy & thick construction, the white strap is only available in looped configuration.

NOTE: Strap length and width are important considerations in selecting a strap wrench and the replacement straps. Sometimes Grip Pads are recommended for use with strap wrenches to add traction while tightening some surfaces. If you have any questions about the best combination for your application, contact DMC.

STRAP COLORS					
COLOR	SMALL DIAMETERS	MEDIUM DIAMETERS	LARGE DIAMETERS	TORQUE RANGE	LOOPLESS AVAILABLE
Black	X	X	X	Med	X
Blue*	X	X	X	Med-High	X
Red		X	X	High	X
White		X	X	High	

*The blue straps are preferred for connector/accessory use.

STRAP CONFIGURATIONS

LOOPED LOOPLESS



STRAP WRENCH SIZES



A: The BT-BS-610 Series tool tip is our small-diameter tip and designed to accommodate connectors and backshells with diameters from .25 to 1.5 inches. Straps are .5 an inch wide.

B: The BT-BS-609 Series tool tip is our most popular choice for general purpose use. The mid-diameter tip is designed to accommodate connectors and backshells with diameters from .5 to 2.50 inches. Straps are .5 an inch wide.

C: The BT-BS-611 Series tool tip is our large-diameter tip designed to accommodate connectors and backshells with diameters from 1 to 4 inches. Straps are 5/8 an inch wide.

C: The BT-BS-618 Series tool tip is also a large-diameter tip like the BT-BS-611 designed to accommodate connectors and backshells with diameters from 1 to 4 inches, but with a 1 inch wide strap for better gripping and applying higher torque values.

LOOPLESS-STRAP STRAP WRENCH

All straps wear and break. The most common point of wear is at the upper edge of the tool tip, near the base of the strap. The standard straps have a loop sewn into one end and attach to the wrench body with a simple link. However, when the strap eventually breaks, it is unusable.

The Loopless Strap Tool Series uses a clamping buckle to attach a loopless strap to the wrench body. When a loopless strap breaks at the strain point, the majority of the strap is still usable. The operator simply removes the broken section, installs the remaining strap, and continues working.

LOOPLESS-STRAP STRAP WRENCHES

TOOL TIP STYLE	WRENCH P/N	STRAP P/N	STRAP WIDTH (COLOR)	STRAP LOOPED	SUGGESTED GRIPPING DIAMETER
A	BT-BS-610SS	BT-A-6010-BK	1/2" (Black)	No	.25" to 1.50"
	BT-BS-610BSS	BT-A-6010B-BK*	1/2" (Blue)	No	.25" to 1.50"
	BT-BS-610RSS	BT-A-6010R-BK	1/2" (Red)	No	.25" to 1.50"
B	BT-BS-609SS	BT-A-6010-BK	1/2" (Black)	No	.50" to 2.50"
	BT-BS-609BSS	BT-A-6010B-BK*	1/2" (Blue)	No	.50" to 2.50"
	BT-BS-609RSS	BT-A-6010R-BK	1/2" (Red)	No	.50" to 2.50"
C	BT-BS-611SS	BT-A-6175-BK	5/8" (Black)	No	1.00" to 4.00"
	BT-BS-611BSS*	BT-A-6175B-BK*	5/8" (Blue)	No	1.00" to 4.00"
C	BT-BS-618SS	BT-A-6185-BK	1" (Black)	No	1.00" to 4.00"
	BT-BS-618BSS*	BT-A-6185B-BK*	1" (Blue)	No	1.00" to 4.00"

*The blue series strap wrench and replacement straps are preferred for connector/accessory use.

See Torque Conversion Charts on page 37 for use of strap wrenches in combination with torque tools.

LOOPLESS STRAP INSTALLATION



The strap is inserted into the buckle, fed back over itself, and clamped in place with a 7/32 inch set screw.



Loopless-Strap Wrench **Loopless Strap**



Looped Strap Wrench **Looped Strap**

STANDARD DMC STRAP WRENCHES CAN BE CONVERTED TO "LOOPLESS".

All strap wrenches can be ordered as Loopless versions. However, if you already own DMC strap tools, we offer a Retro Fit Kit to convert your existing looped strap tools to Loopless Strap Tools.

RETROFIT KITS to convert looped strap tools to loopless strap tools.

Retrofit Kit P/N	for Tool P/N	Strap Width (color)	Strap Looped	Suggested Gripping Diameter
BT-BS-609SS-RK	BT-BS-609	1/2" (Black)	No	.50" to 2.50"
BT-BS-609BSS-RK	BT-BS-609B	1/2" (Blue)	No	.50" to 2.50"
BT-BS-610SS-RK	BT-BS-610	1/2" (Black)	No	.25" to 1.50"
BT-BS-610BSS-RK	BT-BS-610B	1/2" (Blue)	No	.25" to 1.50"
BT-BS-611SS-RK	BT-BS-611	5/8" (Black)	No	1.00" to 4.00"
BT-BS-618SS-RK	BT-BS-618	1" (Black)	No	1.00" to 4.00"

RETROFIT KIT COMPONENTS



HANDLE-LESS STRAP WRENCH



The **BT-BS-611T** is shown here.

HANDLE-LESS STRAP WRENCHES

DMC's handle-less strap wrench line has been specifically designed for torque-accurate connector assembly. Based on DMC's established line of torque wrenches, the handle-less strap wrench attaches to the **BT-ST-300D Digital Torque Tool** and provides accurate torque without the interference of the strap wrench handle.

**SEE PAGE 37 FOR TORQUE
CONVERSION TABLES.**

HANDLE-LESS STRAP WRENCHES FOR TORQUE WRENCHES					
TOOL TIP STYLE	WRENCH P/N	STRAP P/N	STRAP WIDTH (COLOR)	STRAP LOOPED	SUGGESTED GRIPPING DIAMETER
HANDLE-LESS LOOPED STRAP WRENCHES					
A	BT-BS-610T	BT-A-6010	1/2" (Black)	Yes	.25" to 1.50"
	BT-BS-610BT*	BT-A-6010B*	1/2" (Blue)	Yes	.25" to 1.50"
	BT-BS-610WT	BT-A-6010W	1/2" (White)	Yes	.25" to 1.50"
	BT-BS-610RT	BT-A-6010R	1/2" (Red)	Yes	.25" to 1.50"
B	BT-BS-609T	BT-A-6010	1/2" (Black)	Yes	.50" to 2.50"
	BT-BS-609BT*	BT-A-6010B*	1/2" (Blue)	Yes	.50" to 2.50"
	BT-BS-609WT	BT-A-6010W	1/2" (White)	Yes	.50" to 2.50"
	BT-BS-609RT	BT-A-6010R	1/2" (Red)	Yes	.50" to 2.50"
C	BT-BS-611T	BT-A-6175	5/8" (Black)	Yes	1.00" to 4.00"
	BT-BS-611BT*	BT-A-6175B*	5/8" (Blue)	Yes	1.00" to 4.00"
	BT-BS-611WT	BT-A-6175W	5/8" (White)	Yes	1.00" to 4.00"
C	BT-BS-618T	BT-A-6185	1" (Black)	Yes	1.00" to 4.00"
	BT-BS-618BT*	BT-A-6185B*	1" (Blue)	Yes	1.00" to 4.00"
	BT-BS-618WT	BT-A-6185W	1" (White)	Yes	1.00" to 4.00"
HANDLE-LESS LOOPLESS STRAP WRENCHES					
A	BT-BS-610SST	BT-A-6010-BK	1/2" (Black)	No	.25" to 1.50"
	BT-BS-610BSST	BT-A-6010B-BK*	1/2" (Blue)	No	.25" to 1.50"
	BT-BS-610RSST	BT-A-6010R-BK	1/2" (Red)	No	.25" to 1.50"
B	BT-BS-609SST	BT-A-6010-BK	1/2" (Black)	No	.50" to 2.50"
	BT-BS-609BSST	BT-A-6010B-BK*	1/2" (Blue)	No	.50" to 2.50"
	BT-BS-609RSST	BT-A-6010R-BK	1/2" (Red)	No	.50" to 2.50"
C	BT-BS-611SST	BT-A-6175-BK	5/8" (Black)	No	1.00" to 4.00"
	BT-BS-611BSST*	BT-A-6175B-BK*	5/8" (Blue)	No	1.00" to 4.00"
C	BT-BS-618SST	BT-A-6185-BK	1" (Black)	No	1.00" to 4.00"
	BT-BS-618BSST*	BT-A-6185B-BK*	1" (Blue)	No	1.00" to 4.00"

*The blue series strap wrench and replacement straps are preferred for connector/accessory use.

PRODUCTION STATION APPLICATIONS

When the measurement of torque is a requirement of a particular cable assembly operation, this can be easily accomplished with the use of the digital torque wrench.



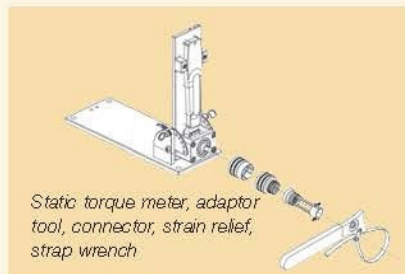
Digital torque wrench, adaptor, connector, strain relief



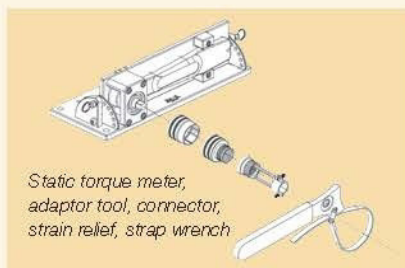
Digital torque wrench, handle-less strap wrench, connector, strain relief

If a static torque meter is needed, the digital torque wrench can be placed in a static mount base. The adaptor is then attached to the square drive on the torque meter, and this arrangement holds the connector while the backshell accessory is torqued onto the connector, with a strap wrench.

When the torque reaches the pre-set value, a signal light advises the operator that the desired torque value has been applied.

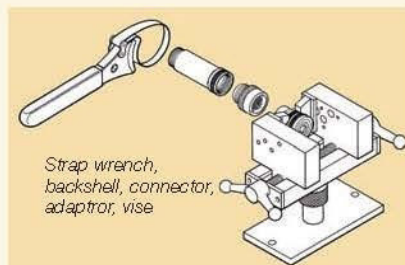


Static torque meter, adaptor tool, connector, strain relief, strap wrench



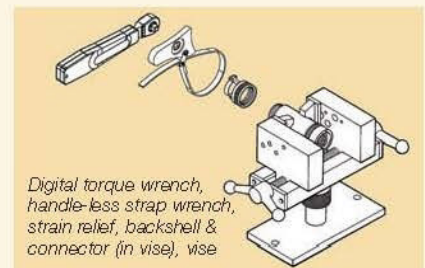
Static torque meter, adaptor tool, connector, strain relief, strap wrench

When optimum repeatability and production efficiency demand, the assembly station vise can be used to complement the ability of adaptor tools to stabilize the connector. As shown, the vise is being used to firmly hold the adaptor tool, while a strap wrench is being used to tighten the backshell onto the connector.



Strap wrench, backshell, connector, adaptor, vise

On multi-piece backshells, the correct torque on each accessory can only be achieved by efficiently holding adjacent parts. In the example shown, the assembly station vise is being used to hold the backshell segment already torqued onto the connector, while the strain relief is tightened with a strap wrench and a torque meter. Thus, the correct torque can be applied to the backshell segments without affecting the torque value already applied to prior connector/ accessory components.



Digital torque wrench, handle-less strap wrench, strain relief, backshell & connector (in vise), vise



Handle-less strap wrench, digital torque wrench, strain relief, backshell (in vise jaws), connector, vise