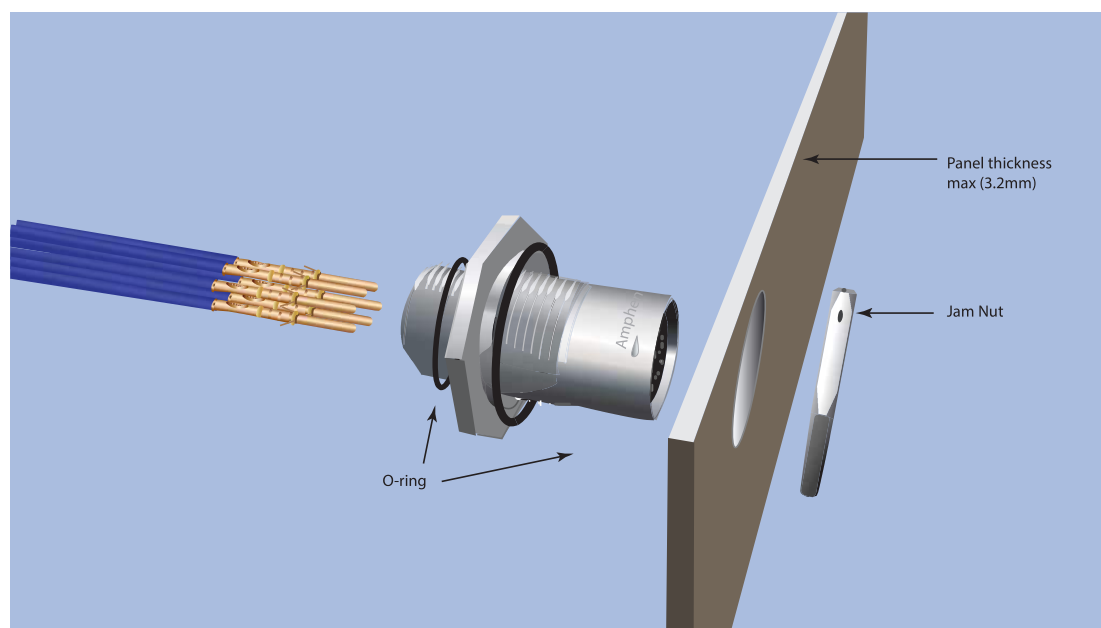


# Assembly Instructions

## Jam Nut Assembly and Installation Instructions

1. Remove insulation from wires and terminate contacts
2. Push contacts into connector insert
3. Seat o-ring, install and fasten receptacle in the panel cut-out
4. Tighten jam nut

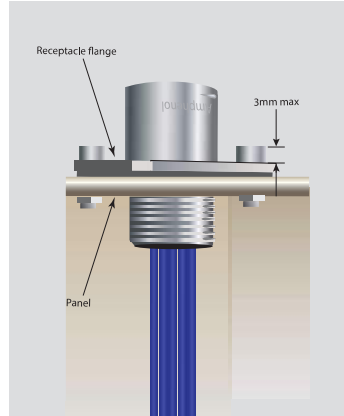
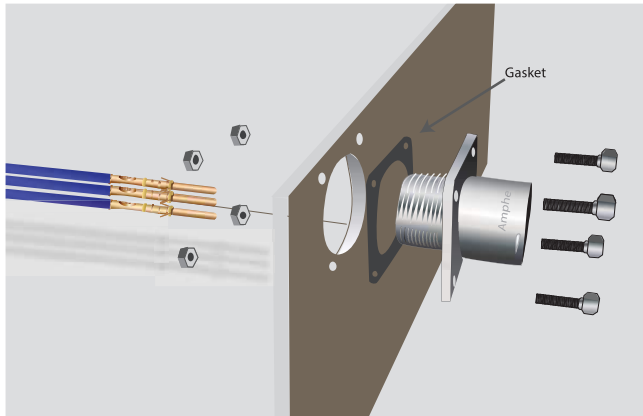


Shell Size	Jam Nut torque (Nm)	Exterior jam nut dim. (min)	Ø Wire max (mm)	Panel thickness max (mm)
10	3.4-4.1	22.2	3.2	3.2
12	5.2-5.6	27.0	3.2	3.2
14	6.2-6.8	32.0	3.2	3.2
16	7.9-8.5	33.3	3.2	3.2
18	9.0-9.6	36.5	3.2	3.2
20	10.2-10.7	39.7	3.2	3.2
22	11.3-12.4	42.9	3.2	3.2
24	12.4-13.6	46.0	3.2	3.2

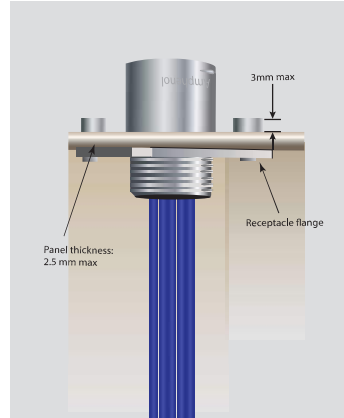
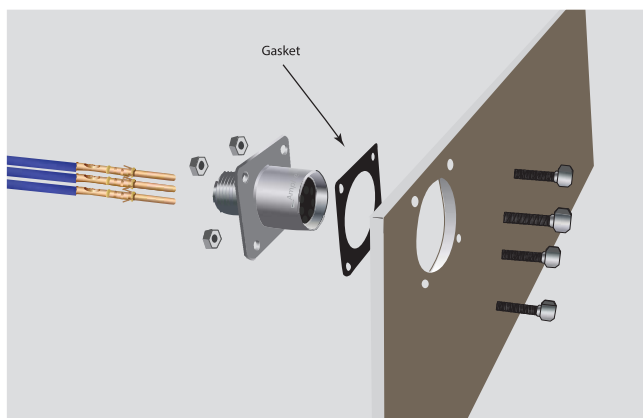
# Assembly Instructions

## Flange Assembly and Installation Instructions

Front Assembly



Rear Assembly



Shell Size	Screw tightening torque (Nm)
10	0.30/0.40
12	0.30/0.40
14	0.30/0.40
16	0.30/0.40
18	0.35/0.45
20	0.50/0.60
22	0.55/0.65
24	0.55/0.65

1. Remove insulation from wires and terminate contacts
2. Push contacts into connector insert
3. Install and fasten receptacle in the panel cutout
4. For increased sealing of the system, use optional gasket

# Assembly Instructions

## eco | mate<sup>®</sup> rm Straight Plug and Receptacle Cable Assembly



### Step 1: Slide parts onto cable



Table 1		
Shell Size	L1 (long back shell)	L1 (short back shell)
10	25~30 mm	20~25 mm
12	30~35 mm	25~30 mm
14	30~35 mm	25~30 mm
16	35~40 mm	30~35 mm
18	35~40 mm	30~35 mm

### Step 2: Strip jacket



\* Make sure exposed shielding is not nicked or cut

### Step 3: Attach tie-wrap



Dimensions are for reference only

Table 2		
Contact Size	L2 (stamped)	L2 (machined)
8#	NA	7.5~8.5 mm
12#	8.2~9.2 mm	8.5~9.5 mm
16#	5.0~5.5 mm	7.5~8.5 mm
20#	5.5~6.0 mm	7.0~8.0 mm

### Step 4: Trim tie-wrap



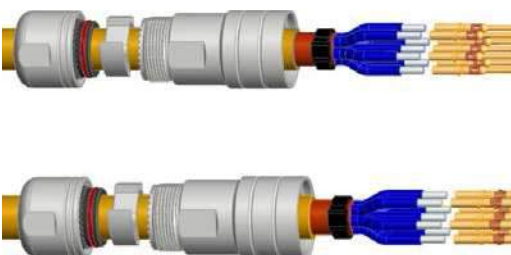
### Step 5: Trim braided shield flush to edge of tie-wrap



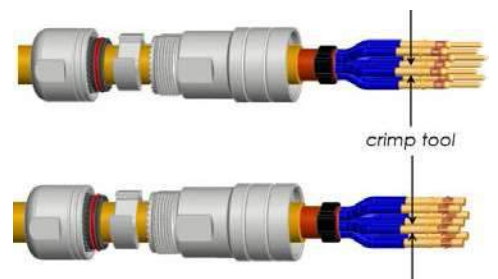
### Step 6: Strip to conductor



### Step 7: Attach contacts to wire leads



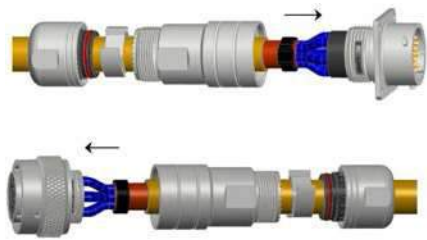
### Step 8: Crimp contacts



# Assembly Instructions

## eco | mate® rm Straight Plug and Receptacle Cable Assembly (con't)

### Step 9: Insert contacts into connector cavities



### Step 11: Push shielding clip into backshell



### Step 12: Push cable grommet into backshell



### Step 13: Tighten metal nut



### Step 14 Mate receptacle & plug (align the master key)



### Step 10: Assemble back shell

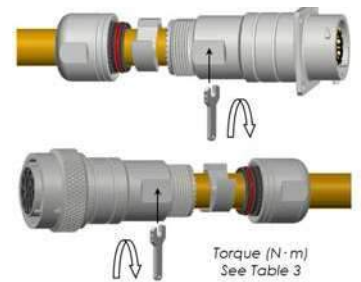


Table 3

Size	Torque=T1 (N.m)
10	1.5~2.5 N.m
12	2.5~4.0 N.m
14	2.5~4.0 N.m
16	3.0~4.5 N.m
18	3.0~4.5N.m

Table 4

Size	Torque=T2 (N.m)
10	2.0~3.0 N.m
12	3.0~5.0 N.m
14	3.5~5.5 N.m
16	4.0~6.0 N.m
18	5.0~8.0 N.m

### Assembled Dimensions

Shell Size	Plug with socket match with long cord grip	Plug with socket match with short cord grip	Plug with pin match with long cord grip	Plug with pin match and short cord grip
10	43.0mm	33.0mm	38.0mm	28.0mm
12	45.0mm	35.0mm	35.0mm	25.0mm
14	45.0mm	35.0mm	35.0mm	25.0mm
16	45.0mm	35.0mm	40.0mm	30.0mm
18	48.0mm	39.0mm	40.0mm	32.0mm

# Assembly Instructions

## eco | mate<sup>®</sup> rm Straight Plug and Receptacle with End Cap



### Step 1: Strip insulator

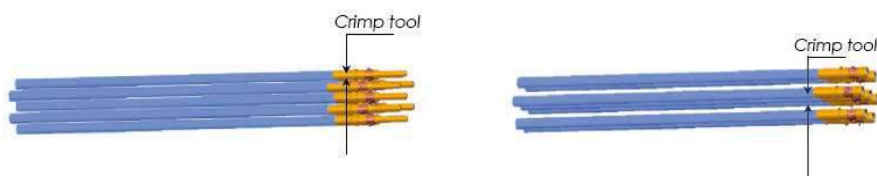


Table 2		
Contact Size	L2 (stamped)	L2 (machined)
8#	NA	7.5~8.5 mm
12#	8.2~9.2 mm	8.5~9.5 mm
16#	5.0~5.5 mm	7.5~8.5 mm
20#	5.5~6.0 mm	7.0~8.0 mm

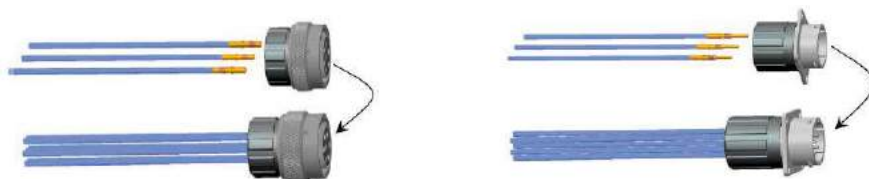
### Step 2: Attach contacts to wire leads



### Step 3: Crimp contacts



### Step 4: Insert contacts into connector cavities



### Step 5: Mate plug and receptacle (align the master key)



# Assembly Instructions

## eco | mate<sup>®</sup> rm Right Angle Plug and Receptacle Cable Assembly



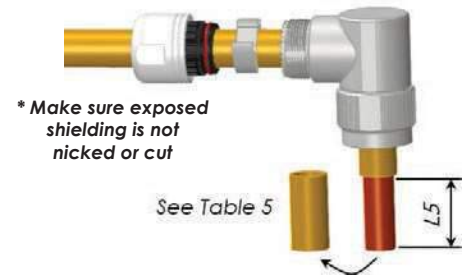
**Step 1: Slide parts onto cable**



Table 5	
Size	L5 (90° cord grip)
10	NA
12	60~65 mm
14	60~65 mm
16	65~70 mm
18	NA

*Dimensions are for reference only*

**Step 2: Strip jacket**



**Step 3: Attach tie-wrap**

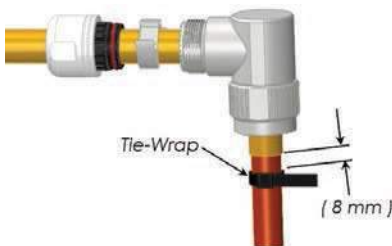


Table 2		
Contact Size	L2 (stamped)	L2 (machined)
8#	NA	7.5~8.5 mm
12#	8.2~9.2 mm	8.5~9.5 mm
16#	5.0~5.5 mm	7.5~8.5 mm
20#	5.5~6.0 mm	7.0~8.0 mm

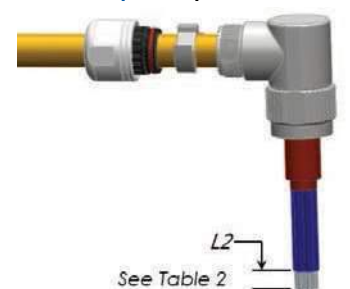
**Step 4: Trim tie-wrap**



**Step 5: Trim braided shield flush to edge of tie-wrap**



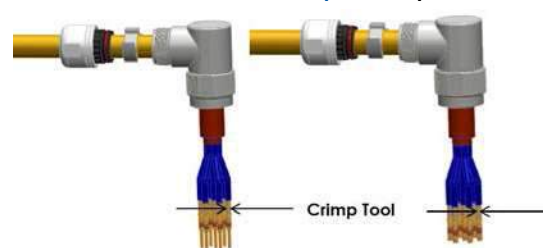
**Step 6: Strip to conductor**



**Step 7: Attach contacts to wire leads**



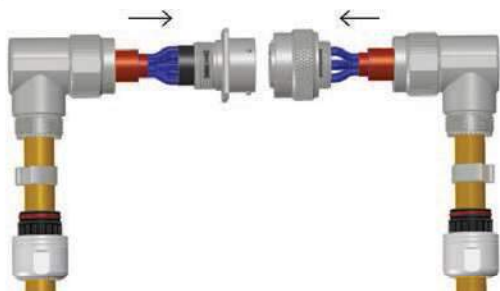
**Step 8: Crimp contacts**



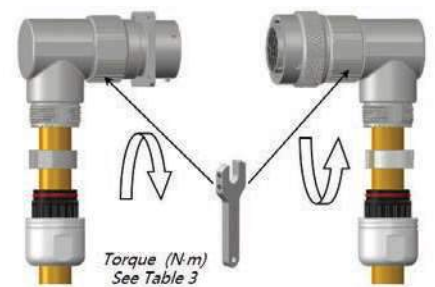
# Assembly Instructions

## eco | mate<sup>®</sup> rm Right Angle Plug and Receptacle Cable Assembly (cont.)

**Step 9: Insert contacts into connector cavities**



**Step 10: Assemble back shell**



**Step 11: Push shielding clip into backshell**



**Step 12 Push cable grommet into backshell**

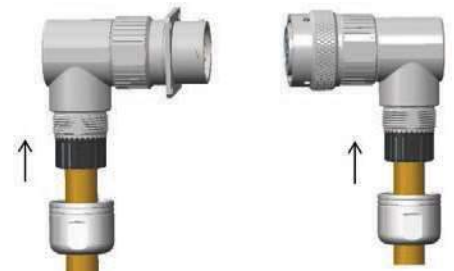
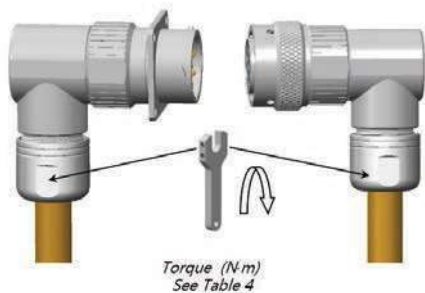


Table 4	
Size	Torque= T2 (N.m)
10	2.0-3.0 N.m
12	3.0-5.0 N.m
14	3.5-5.5 N.m
16	4.0-6.0 N.m
18	5.0-8.0 N.m

**Step 13: Tighten metal nut**



**Step 14: Male receptacle & plug (align the master key)**

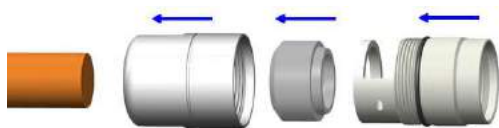


# Assembly Instructions

## eco | mate® rm High Amperage Straight Plug Cable Assembly



**Step 1: Slide components onto cable**



**Step 2: Strip jacket**

\* Make sure exposed shielding is not nicked or cut



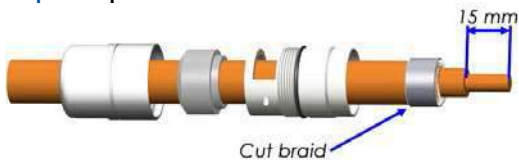
**Step 3: Fold braided shielding over jacket**



**Step 4: Wrap foil over braided shielding**



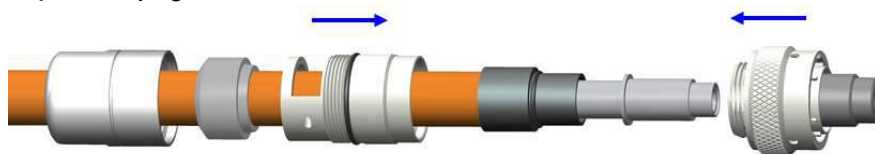
**Step 5: Strip to conductor**



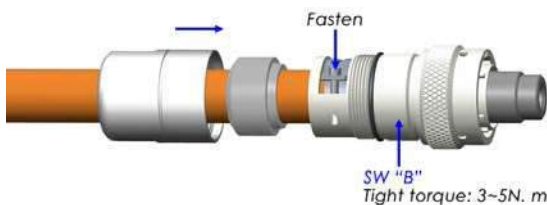
**Step 6: Slide onto conductor and crimp**



**Step 7: Slide plug onto barrel**



**Step 8: Attach and tighten plug as shown**



**Step 9: Attach and tighten backshell as shown**



**Data Chart**

Instruction	Shell 14	Shell 16	Shell 20
Dimension "A"	25 mm	25 mm	30 mm
SW "B"	24 mm	28 mm	32 mm
SW "C"	24.5 mm	29 mm	32.5 mm



# Assembly Instructions

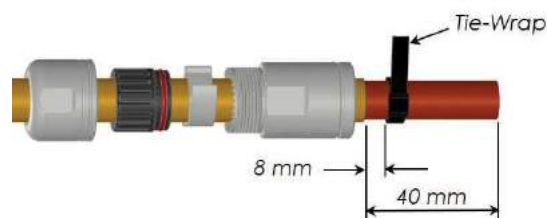
## RTHP SERIES™ Straight Plug - Shell Size 12 Cable Assembly



**Step 1:** Slide parts onto cable



**Step 2:** Strip jacket to braided shielding and attach tie wrap



**Step 3:** Cut tie wrap to remove excessive material. Trim shielding flush to edge of tie wrap



**Step 4:** Strip to conductor



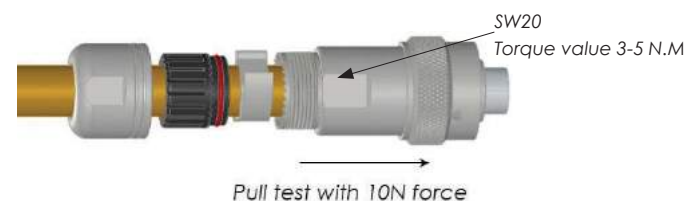
**Step 5:** Crimp terminal to conductor



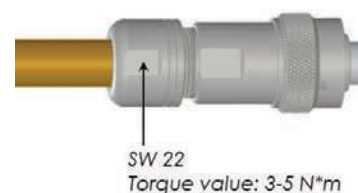
**Step 6:** Slide plug onto crimped terminal assembly



**Step 7:** Tighten plug to backshell. Perform pull test to assure correct contact assembly



**Step 8:** Insert shielding clip and cable grommet. Attach and tighten back-nut to backshell

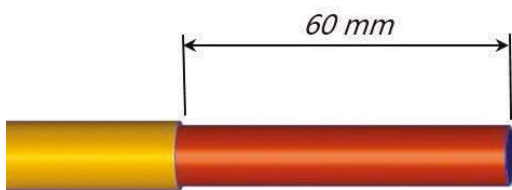


# Assembly Instructions

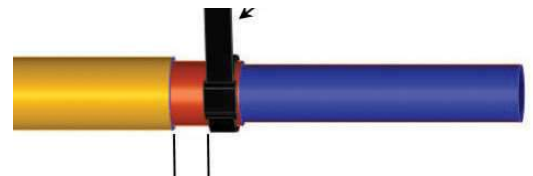
## eco | mate<sup>®</sup> rm High Amperage 90° Plug Cable Assembly



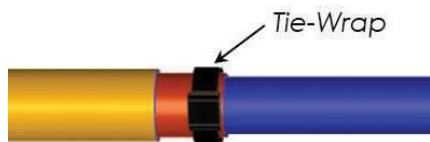
**Step 1:** Strip jacket to metal braiding



**Step 2:** Attach tie wrap and trim braiding flush to edge of tie-wrap



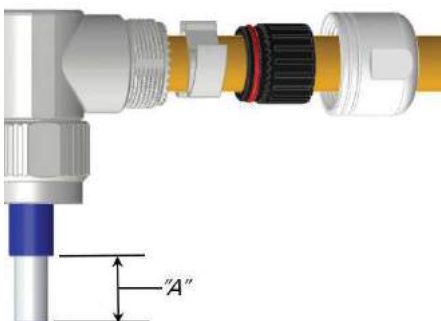
**Step 3:** Trim tie-wrap



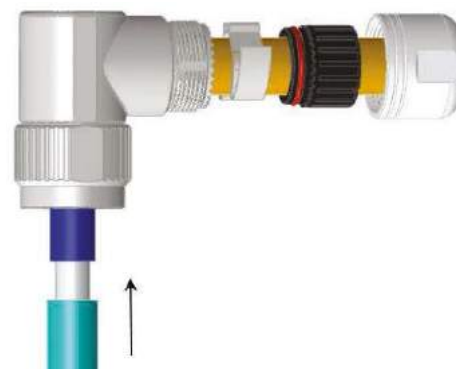
**Step 4:** Push cable into backshell. Slide components onto cable



**Step 5:** Trim jacket to conductor



**Step 6:** Slide heat shrink tubing onto cable



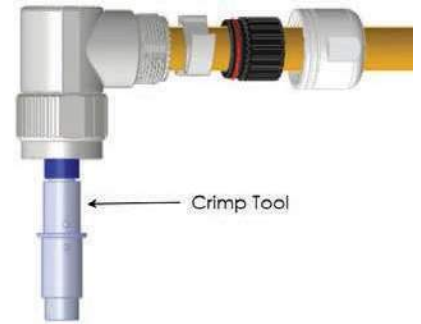
# Assembly Instructions

## eco | mate<sup>®</sup> rm High Amperage 90° Plug Cable Assembly (cont.)

**Step 7: Crimp barrel to conductor**



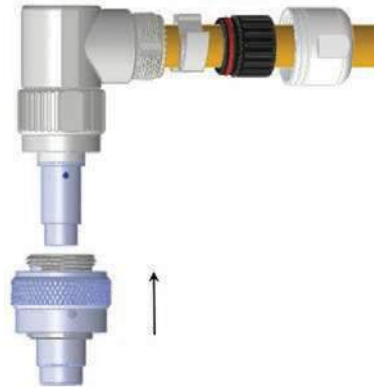
**Step 8: Heat shrink tube over crimp**



**Step 9:**



**Step 10: Attach plug to backshell**



**Step 11: Insert shielding clip and cable grommet. Tighten connector to backshell as shown**



**Step 12: Attach cable-nut to backshell and tighten as shown**



**Data Chart**

Instruction	Shell 12	Shell 14	Shell 16
Dimension "A"	10 mm	15 mm	15 mm
SW "B"	22 mm	25 mm	28 mm
SW "C"	22 mm	22 mm	25 mm