



# MDCX and MDHC Coaxial Connectors

## MDCX and MDHC Overview and Specifications

Sabritec's multipin MDCX and MDHC coax connectors have a constant 50 ohm airline impedance interface and are 30% smaller than our SCX coaxial connectors. Each coax contact has a maximum overall diameter of 0.125" fitted into a low-profile metalized housing.

MDCX and MDHC coaxial contacts are compact in size allowing multiple high density connections in a Micro-D style shell for applications where space and weight savings are important. No cumbersome spring mounts are required. These connectors are also available with locking post mechanisms or blind-mate hardware attachment.

Insert arrangements are available in 2, 4, 6, 8 and 10 way coax assemblies as well as mixed signal, power, coax and high speed twinax contacts for hybrid arrangements.

MDHC high frequency coaxial contacts are a drop in replacement to Sabritec's MDCX RF contacts with an increased frequency range from 10 GHz to 40 GHz.

- MDCX VSWR of 1.25:1 (typ) up to 10 GHz (max mated pair).
- MDHC VSWR of 1.3:1 (typ) up to 30GHz (max mated pair).
- MDHC VSWR of 1.5:1 (typ) up to 40GHz (max mated pair).

Mechanical & Environmental Specifications	
Temperature Rating	-65°C to + 165°C
Corrosion	MIL-STD-202 Method 101, Test Condition B
Shock	MIL-STD-202 Method 213, Test Condition B
Vibration	MIL-STD-202 Method 204, Test Condition B
Thermal Shock	MIL-STD-202 Method 107, Test Condition B
Durability	1,000 cycles min. 500 cycles min. Signal Contacts
Mating/Unmate Force	1 lb. min.
Float Mount Constraints	0.010" full radial & 0.010 axial misalignment max
Electrical Specifications	
Dielectric Withstanding Voltage	500 VDC @sea level with 70% relative humidity
Insulation Resistance	5000 mega-ohms min. @ 200 VDC
Contact Current Rating	5 Amps max. for 0.030 Signal Pins 2.0 Amps max. for 0.015 Signal Contacts
Characteristic Impedance	50 Ohm constant airline impedance
RF HI Potential Withstanding Voltage	125 VRMS @ 5 MHz
Corona Level @ 70,000 ft.	Center contact to intermediate contact: 125 VAC
Permeability	2.0 max.
Frequency Range	MDHC: DC-40 GHz MDCX: DC-10 GHz
VSWR	1.5:1 (typ) Mated Pair up to 40 GHz (MDHC) 1.3:1 (typ) Mated Pair up to 30 GHz (MDHC) 1.25:1 (typ) Mated Pair up to 10 GHz (MDCX)
Material & Finishes	
Center & Outer Spring Contacts	Brass per ASTM-B16, alloy UNS C36000 or BeCu per ASTM-B196, alloy UNS C17200, C17300 Gold Plate per MIL-DTL-45204, Type II, Class 1
Insulators	PTFE per ASTM D-1710
Connector Plug/ Receptacle Shell	Aluminum per ASTM-B211/221, 6061-T6 Electroless Nickel Plate per SAE-AMS-C-26074
RoHS Compliant	

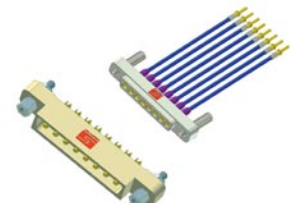
All specifications subject to change without notice.



MDCX Connectors



MDHC Connectors



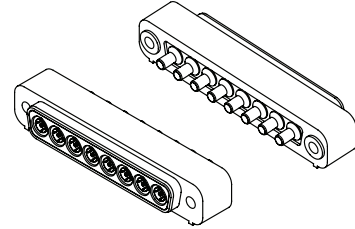
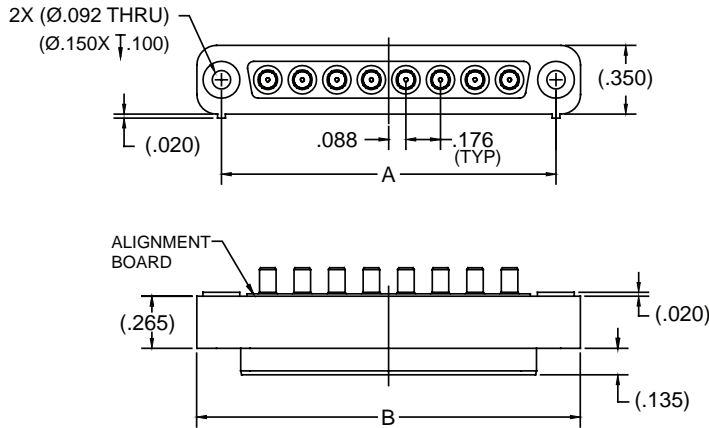
Multipin Coax Connector with Locking Post



# MDCX and MDHC Connectors

## Connector Plug Bodies for Socket Contacts

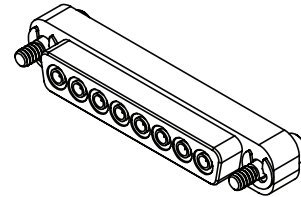
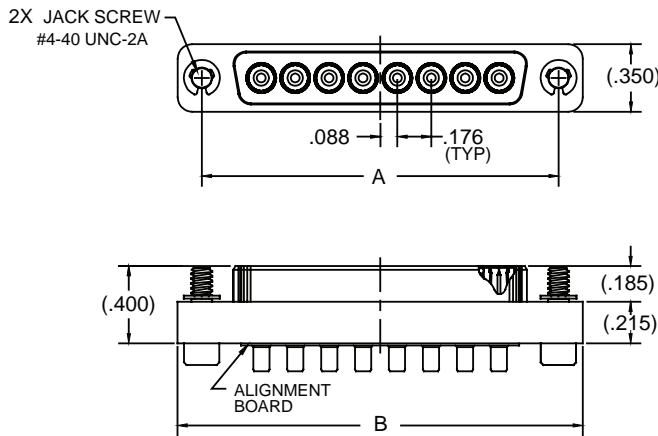
### Connector Plug for Cable Mount MDCX & MDHC Coax Socket Contacts



Part Number	Contacts
017300-2003	2
017300-2004	4
017300-2006	6
017300-2008	8
017300-2010	10

\*Cable Mount Coaxial Contacts Sold Separately

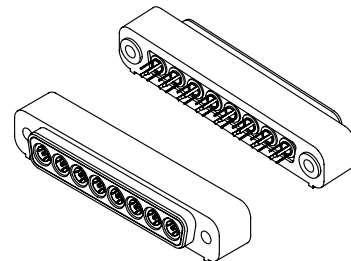
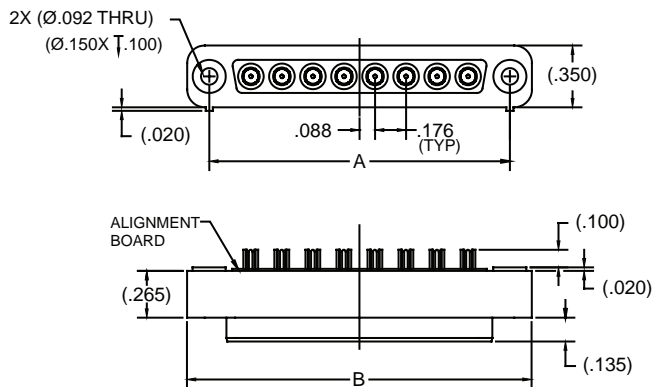
### Connector Plug for Cable Mount MDCX & MDHC Coax Socket Contacts (w/Mounting Hardware)



Part Number	Contacts
017300-2013	2
017300-2014	4
017300-2016	6
017300-2018	8
017300-2020	10

\*Cable Mount Coaxial Contacts Sold Separately

### Connector Plug for MDCX & MDHC With PC-Tail Coax Socket Contacts



\*PC Tail Contacts included

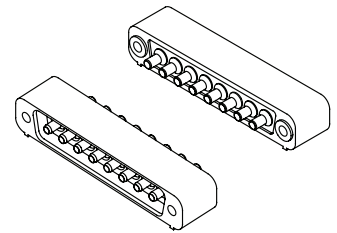
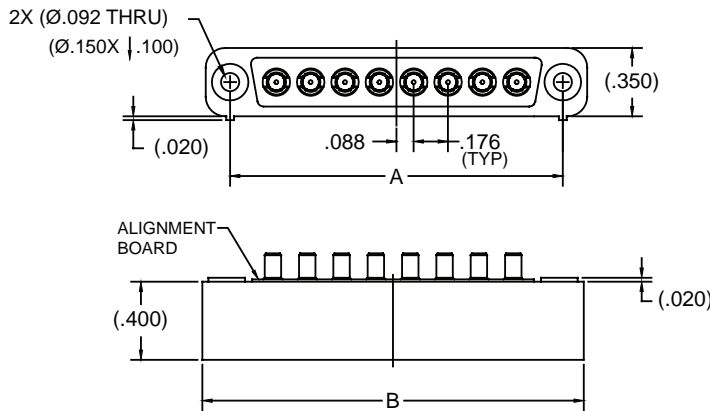
MDCX	MDHC	Contacts
017317-2003	017317-2013	2
017317-2004	017317-2014	4
017317-2006	017317-2016	6
017317-2008	017317-2018	8
017317-2010	017317-2020	10



# MDCX and MDHC Connectors

## Connector Receptacle Bodies for Pin Contacts

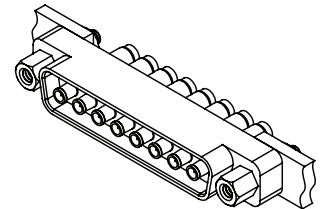
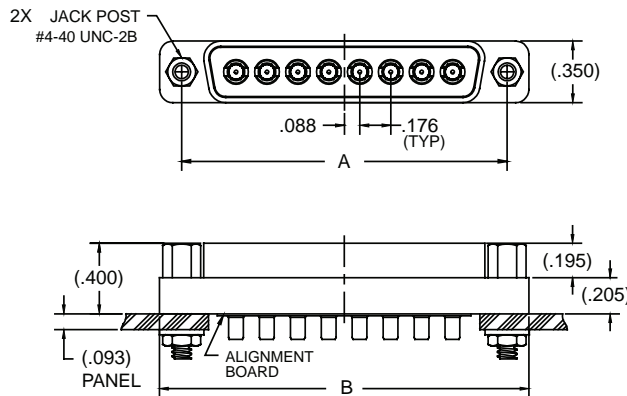
### Connector Receptacle for Cable Mount MDCX & MDHC Coax Pin Contacts



Part Number	Contacts
017300-3003	2
017300-3004	4
017300-3006	6
017300-3008	8
017300-3010	10

\*Cable Mount Coaxial Contacts Sold Separately

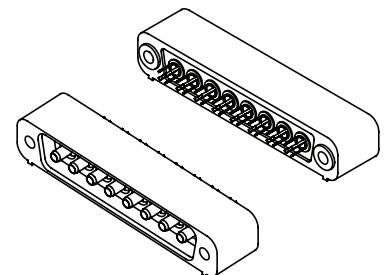
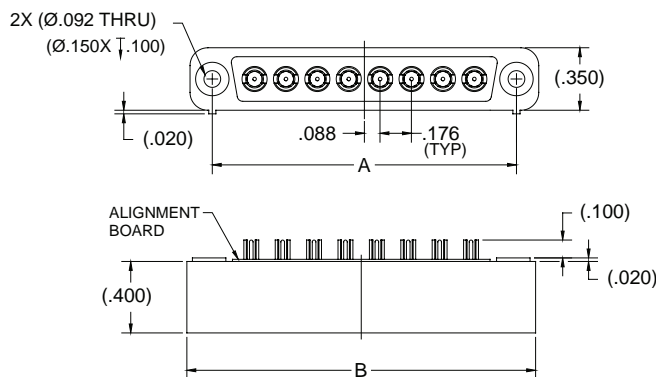
### Connector Receptacle for Cable Mount MDCX & MDHC Coax Pin Contacts (w/Mounting Hardware)



Part Number	Contacts
017300-3013	2
017300-3014	4
017300-3016	6
017300-3018	8
017300-3020	10

\*Cable Mount Coaxial Contacts Sold Separately

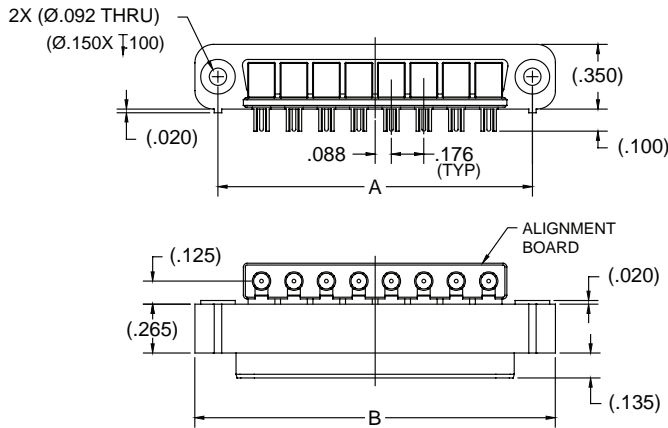
### Connector Receptacle for MDCX & MDHC With PC-Tail Pin Contacts



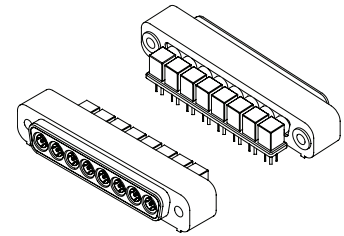
MDCX	MDHC	Contacts
017317-3003	017317-3013	2
017317-3004	017317-3014	4
017317-3006	017317-3016	6
017317-3008	017317-3018	8
017317-3010	017317-3020	10

\*PC Tail Contacts included

## Connector Plug With MDCX Right Angle PC-Tail Coax Socket Contact

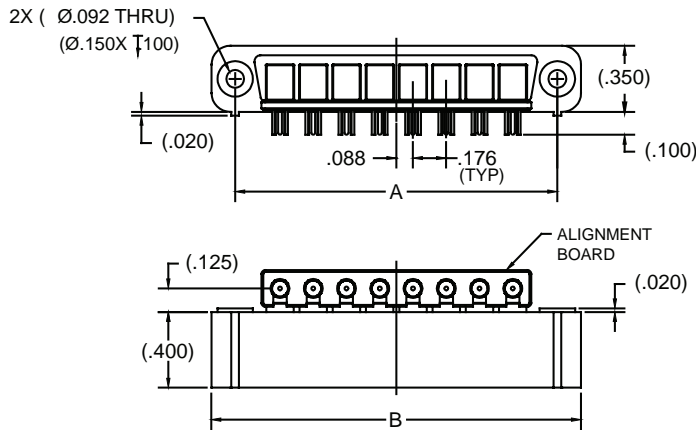


\*PC Tail Contacts included

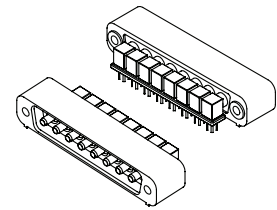


Part Number	Contacts
017317-1103	2
017317-1104	4
017317-1106	6
017317-1108	8
017317-1110	10

## Connector Receptacle With MDCX Right Angle PC-Tail Coax Pin Contact

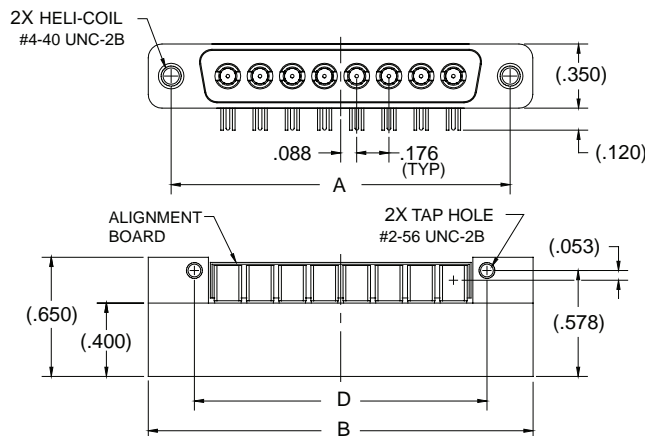


\*PC Tail Contacts included

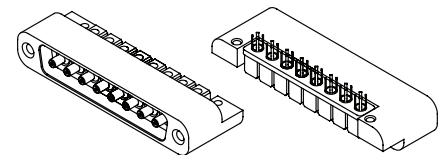


Part Number	Contacts
017317-1003	2
017317-1004	4
017317-1006	6
017317-1008	8
017317-1010	10

## Connector Receptacle With MDCX Right Angle PC-Tail Coax Pin Contact (w/Mounting Hardware)

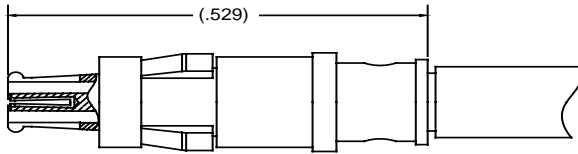


\*PC Tail Contacts included



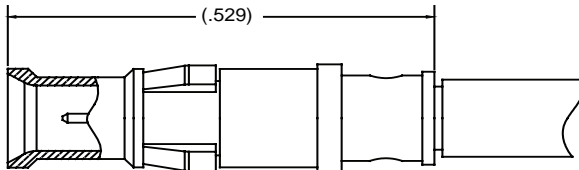
Part Number	Contacts
017317-1203	2
017317-1204	4
017317-1206	6
017317-1208	8
017317-1210	10

## MDHC Coax Pin Contact (DC-40 GHz)



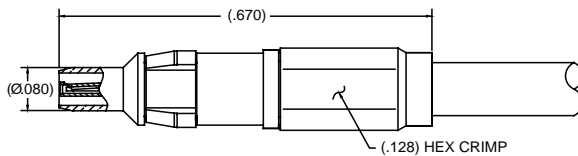
Part Number	Cable Type	Cable
013209-2004	Flexible Coax	RG-405 Flex

## MDHC Coax Socket Contact (DC-40 GHz)



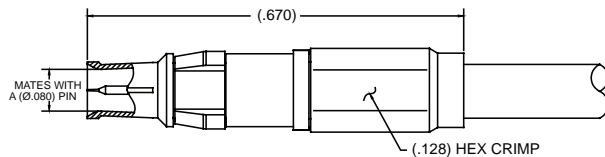
Part Number	Cable Type	Cable
013109-2004	Flexible Coax	RG-405 Flex

## Removable MDCX Coax Pin Contact (DC-10 GHz)



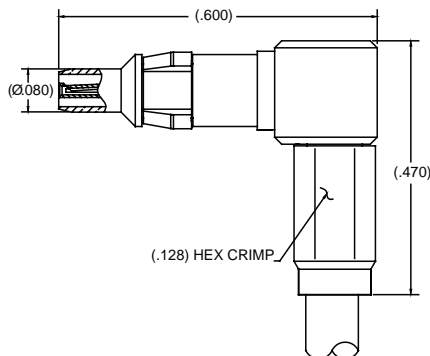
Part Number	Cable Type	Cable
013214-2005	Flexible Coax	RG-178
013214-2004	Flexible Coax	RG-316
013214-2003	Flexible Coax	RG-405 Flex

## Removable MDCX Coax Socket Contact (DC-10 GHz)



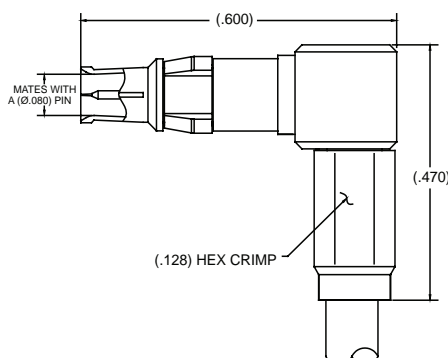
Part Number	Cable Type	Cable
013114-2005	Flexible Coax	RG-178
013114-2004	Flexible Coax	RG-316
013114-2003	Flexible Coax	RG-405 Flex

## Removable MDCX Right Angle Coax Pin Contact (DC-10 GHz)



Part Number	Cable Type	Cable
013214-1003	Flexible Coax	RG-178
013214-1002	Flexible Coax	RG-316
013214-1001	Flexible Coax	RG-405 Flex

## Removable MDCX Right Angle Coax Socket Contact (DC-10 GHz)



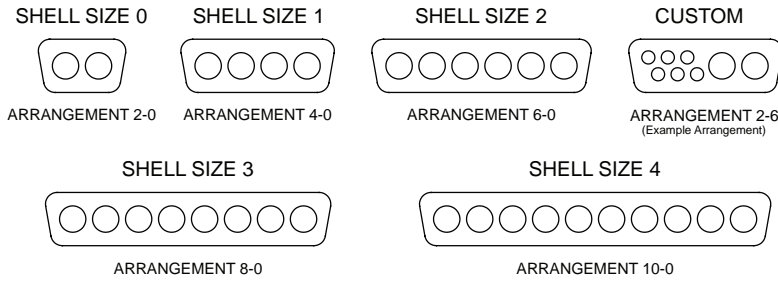
Part Number	Cable Type	Cable
013114-1003	Flexible Coax	RG-178
013114-1002	Flexible Coax	RG-316
013114-1001	Flexible Coax	RG-405 Flex



# MDCX & MDHC Ordering Information

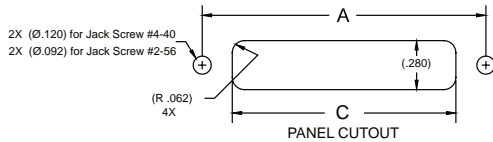
## Insert Arrangements/Interface/Ordering Information

### Insert Arrangements

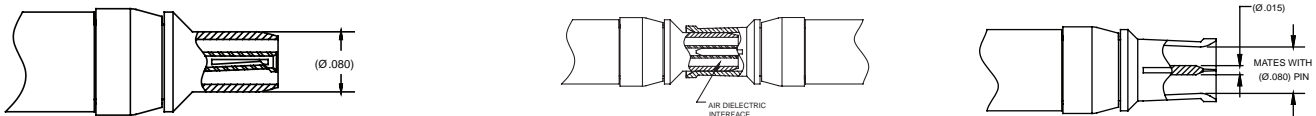


Shell Size	Contacts	A dim.	B dim.	C dim.	D dim.
0	2	.800	1.050	.525	.600
1	4	1.150	1.400	0.875	.950
2	6	1.500	1.750	1.225	1.300
3	8	1.850	2.100	1.575	1.650
4	10	2.200	2.450	1.925	2.000

\*Consult factory for Hybrid Arrangement Dimension Details

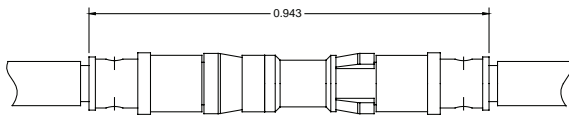


### MDCX Coaxial Contact Interface

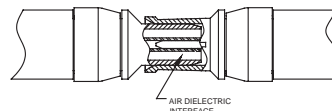


### MDHC Coaxial Contact Interface

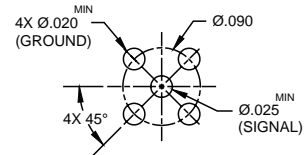
Contact Mated Pair



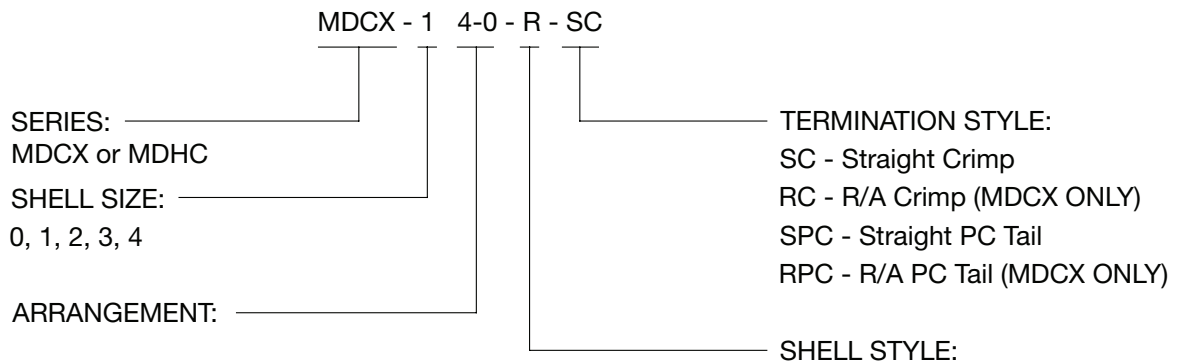
Contact Interface



MDCX & MDHC PCB FOOTPRINT



### Coax Multi-Pin Connector Part Description



Notes:

1. Coax Contacts Sold Separately for Crimp Version
2. Optional mounting hardware available, please specify panel thickness.
3. Removable Coax Contacts Require Removal Tool SIR-029 (ordered separately)
4. Consult Factory for Mixed Layouts

Removal Tool SIR-029

