



**ROTARY CONNECTORS**

*Solutions Engineered to Excel*



## **RB12 & RB18 BACKSHELLS**

Within Rotary Connector's wide range of interconnect products is a full range of backshell hardware. Customers can take advantage of Rotary's global synergy for connectors, backshells and accessories for all their interconnect needs. Here we present our RB12 & RB18 backshell catalogue.

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## Who we are

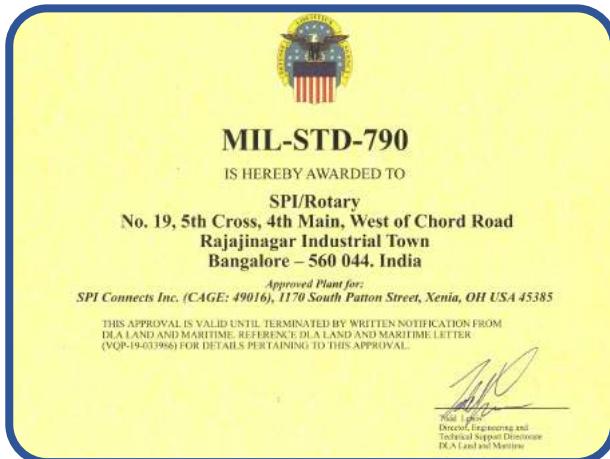
Rotary Connectors Private Limited (RCPL) was established in 2005. It was established as a subsidiary of Rotary Electronics Private Limited which has been in existence since 1987 & has been engaged in the Business of Design, development and manufacturing of Electronic / Electromechanical / Mechanical Parts for Defence, Industrial & Automotive applications.

RCPL is a manufacturer and market leader for interconnection solutions. We take immense pride in the differentiated approach it brings through specialized knowledge in manufacturing military grade connectors and accessories.

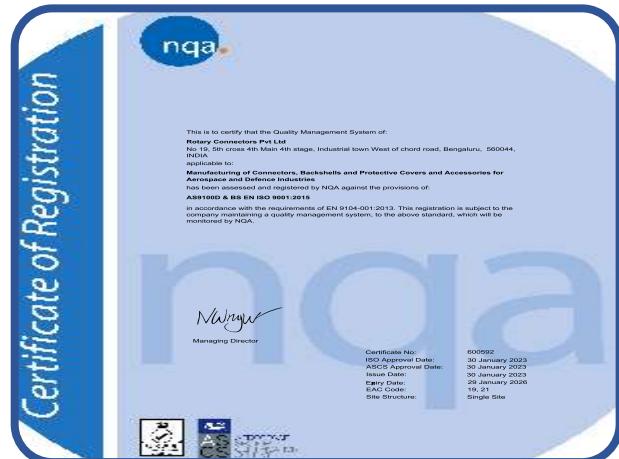
Our offering include MIL DTL 38999 series III, MIL STL 26482 SI,SII, AS85049 backshells and protective covers. We have state of art manufacturing facilities with well equipped qualified testing lab. We also provide customized solutions according to customer needs. We build products for harsh environment in speciality metals such as High grade stainless steel, Marine bronze. We manufacture ruggedized RJ45,USB,HDMI connectors.

Our service excellence has positioned us to be a preferred partner. Backed by our strong relationships with all large Indian companies as well as Multinational companies, we have executed several prestigious projects.

# CERTIFICATIONS



MIL - STD - 790



AS9100 REV D



CEMILAC: 38999 SIII



LCSO APPROVAL

# TECHNICAL LITERATURE

Rotary connector's RB12 back shell series is a low profile, buckle free braid termination series of back shells having memory metal rings that are designed to be electrically heated. All rings are painted with thermochromic paint which changes colour when installation temperature crosses specified 360 degrees.

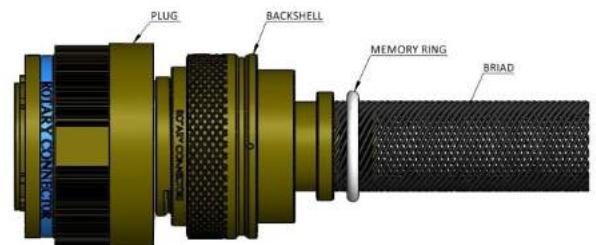
Memory ring adaptors are used to terminate copper, tin or silver plated cable braid to the rear of circular connectors using a shape memory metal ring that shrinks uniformly to secure the braid when heated. The resulting 360° termination withstands severe shock, vibration, temperature cycling, and corrosion and provides excellent screening continuity.

## Commonly available back shell series include

RB12H: MIL-DTL-38999 SERIES III & IV

RB12F: MIL-DTL-38999 SERIES I & II

RB12A: MIL-DTL-26482 SERIES II



For other series variants and many modifications to the catalogue product please feel free to contact factory through sales coordinator.

Rotary connector's RB18 back shell series is a low profile, resilient braid termination series of back shells having constant force springs that are designed to be strapped over banding back shells.

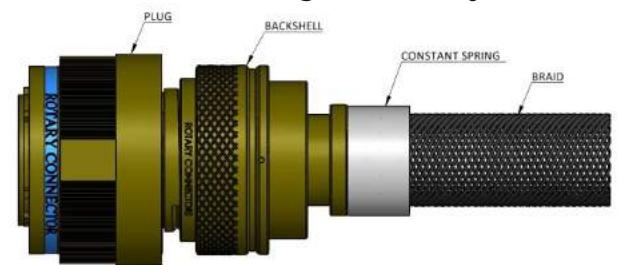
Band strap back shells are used to terminate copper, tin or silver plated cable braid to the rear of circular connectors using a tool free screen termination method by using a stainless steel constant force spring that wraps uniformly on the band strap to secure the braid when locked. The resulting 360° termination withstands severe shock, vibration, temperature cycling, and corrosion and provides excellent screening continuity.

## Commonly available back shell series include

RB18H: MIL-DTL-38999 SERIES III & IV

RB18F: MIL-DTL-38999 SERIES I & II

RB18A: MIL-DTL-26482 SERIES II



For other series variants and many modifications to the catalogue product please feel free to contact factory through sales coordinator.

# CROSS REFERENCE DATA

RB12  
RB18  
RB19  
RB20

RAYCHEM PART NUMBER	EQUIVALENT ROTARY PART	REMARKS
TXR40AB00	RB12H00RW	MIL-DTL-38999 SIII - STRAIGHT
TXR40AB45	RB12H45RW	MIL-DTL-38999 SIII - 45 DEGREE
TXR40AB90	RB12H90RW	MIL-DTL-38999 SIII - 90 DEGREE
TXR40AC00	RB12H00RN	MIL-DTL-38999 SIII - STRAIGHT
TXR40AC45	RB12H45RN	MIL-DTL-38999 SIII - 45 DEGREE
TXR40AC90	RB12H90RN	MIL-DTL-38999 SIII - 90 DEGREE
TXR41AB00	RB12F00RW	MIL-DTL-38999 SII - STRAIGHT
TXR41AB45	RB12F45RW	MIL-DTL-38999 SII - 45 DEGREE
TXR41AB90	RB12F90RW	MIL-DTL-38999 SII - 90 DEGREE
TXR41AC00	RB12F00RN	MIL-DTL-38999 SII - STRAIGHT
TXR41AC45	RB12F45RN	MIL-DTL-38999 SII - 45 DEGREE
TXR41AC90	RB12F90RN	MIL-DTL-38999 SII - 90 DEGREE
TXR54AB00	RB12A00RW	MIL-DTL-26482 SII - STRAIGHT
TXR54AB45	RB12A45RW	MIL-DTL-26482 SII - 45 DEGREE
TXR54AB90	RB12A90RW	MIL-DTL-26482 SII - 90 DEGREE
TXR54AC00	RB12A00RN	MIL-DTL-26482 SII - STRAIGHT
TXR54AC45	RB12A45RN	MIL-DTL-26482 SII - 45 DEGREE
TXR54AC90	RB12A90RN	MIL-DTL-26482 SII - 90 DEGREE
TXR40BW00	RB12H00RMB	MIL-DTL-38999 SIII - STRAIGHT
TXR40BW45	RB12H45RMB	MIL-DTL-38999 SIII - 45 DEGREE
TXR40BW90	RB12H90RMB	MIL-DTL-38999 SIII - 90 DEGREE
TXR40SJ00	RB12H00RK	MIL-DTL-38999 SIII - STRAIGHT
TXR40SJ45	RB12H45RK	MIL-DTL-38999 SIII - 45 DEGREE
TXR40SJ90	RB12H90RK	MIL-DTL-38999 SIII - 90 DEGREE

RAYCHEM PART NUMBER	EQUIVALENT ROTARY PART	REMARKS
91H1-1-B	RB18H00RW	MIL-DTL-38999 SIII - STRAIGHT
91H2-1-B	RB18H45RW	MIL-DTL-38999 SIII - 45 DEGREE
91H3-1-B	RB18H90RW	MIL-DTL-38999 SIII - 90 DEGREE
91H1-1-C	RB18H00RN	MIL-DTL-38999 SIII - STRAIGHT
91H2-1-C	RB18H45RN	MIL-DTL-38999 SIII - 45 DEGREE
91H3-1-C	RB18H90RN	MIL-DTL-38999 SIII - 90 DEGREE
91F1-1-B	RB18F00RW	MIL-DTL-38999 SII - STRAIGHT
91F2-1-B	RB18F45RW	MIL-DTL-38999 SII - 45 DEGREE
91F3-1-B	RB18F90RW	MIL-DTL-38999 SII - 90 DEGREE
91F1-1-C	RB18F00RN	MIL-DTL-38999 SII - STRAIGHT
91F2-1-C	RB18F45RN	MIL-DTL-38999 SII - 45 DEGREE
91F3-1-C	RB18F90RN	MIL-DTL-38999 SII - 90 DEGREE
91A1-1-B	RB18A00RW	MIL-DTL-26482 SII - STRAIGHT
91A2-1-B	RB18A45RW	MIL-DTL-26482 SII - 45 DEGREE
91A3-1-B	RB18A90RW	MIL-DTL-26482 SII - 90 DEGREE
91A1-1-C	RB18A00RN	MIL-DTL-26482 SII - STRAIGHT
91A2-1-C	RB18A45RN	MIL-DTL-26482 SII - 45 DEGREE
91A3-1-C	RB18A90RN	MIL-DTL-26482 SII - 90 DEGREE

# CONNECTOR INTERFACE DATA

CONNECTOR INTERFACE H MIL-DTL-38999 SERIES III & IV	
SHELL SIZE	THREAD SIZE
09	M12 X 1.0
11	M15 X 1.0
13	M18 X 1.0
15	M22 X 1.0
17	M25 X 1.0
19	M28 X 1.0
21	M31 X 1.0
23	M34 X 1.0
25	M37 X 1.0

CONNECTOR INTERFACE F MIL-DTL-38999 SERIES II	
SHELL SIZE	THREAD SIZE
09/08	7/16-28 UNEF
11/10	9/16-24 UNEF
13/12	11/16-24 UNEF
15/14	13/16-20 UNEF
17/16	15/16-20 UNEF
19/18	1-1/16-18 UNEF
21/20	1-3/16-18 UNEF
23/22	1-5/16-18 UNEF
25/24	1-7/16-18 UNEF

CONNECTOR INTERFACE A MIL-DTL-26482 SERIES II	
SHELL SIZE	THREAD SIZE
08	1/2-20 UNEF
10	5/8-24 UNEF
12	3/4-20 UNEF
14	7/8-20 UNEF
16	1-20 UNEF
18	1-1/16-18 UNEF
20	1-3/16-18 UNEF
22	1-5/16-18 UNEF
24	1-7/16-18 UNEF

# MATERIAL AND FINISH CODE

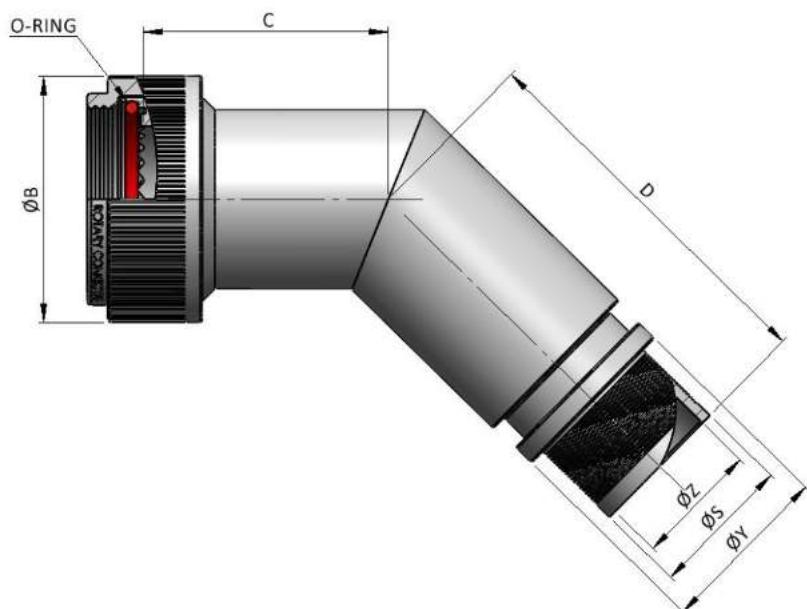
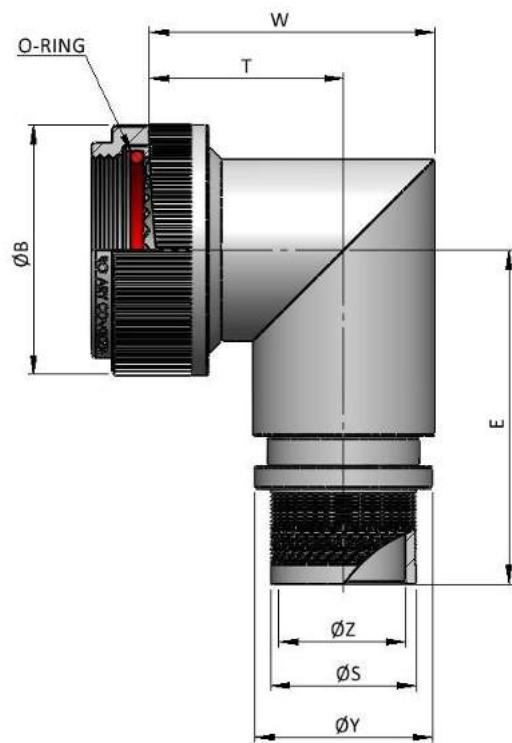
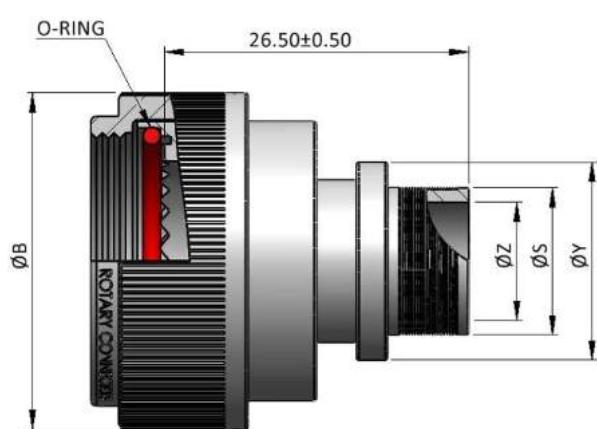
COMPONENT	MATERIAL
BARRELS	Aluminum 6061 or Stainless steel 303 or Nickel aluminum bronze CA104
BARREL CASTINGS	Aluminum Alloy A380
BRAID/SHIELD	Tinned copper as per QQB-575
CLAMP BODIES	Aluminum alloy A380 or Stainless steel 300 series
CLAMP GROMMETS/ BUSHINGS	Neoprene, Silicone or Flouro silicone
CLAMP HARDWARE	Stainless steel 300 series
COUPLING RINGS	Aluminum 6061 or Stainless steel 303 or Nickel aluminum bronze CA104
O-RINGS	Silicone (Red) or Flouro silicone (Orange)
RETAINING CLIPS	Engineering Plastic
CONSTANT SPRING	Stainless steel 300 series ; Passivated

ROTARY CODE	MIL CODE	MATERIAL	FINISH	APPEARANCE	SPECIFICATION	SALT SPRAY HOURS
A	A	ALUMINIUM ALLOY	BLACK ANODIZED	BLACK	AMS-A-8625 Type II; Class 2; Non conductive -65°C to +175°C	336
N	N	ALUMINIUM ALLOY	ELECTRO LESS NICKEL	BRIGHT NICKEL	AMS-C-26074 Class 4; Grade A; Conductive -65°C to +200°C	96
W	W	ALUMINIUM ALLOY	CADMUM	OLIVE DRAB GREEN	AMS-QQ-P-416 Type II; Class 2; Conductive -65°C to +175°C	1000
Z	Z	ALUMINIUM ALLOY	ZINC NICKEL	BLACK	ASTM B814 Grade 5; Conductive -65°C to +175°C	500
ZB	-	ALUMINIUM ALLOY	ZINC COBALT	BLACK	ASTM B840 Grade 6; Type D; Conductive -65°C to +175°C	350
ZG	-	ALUMINIUM ALLOY	ZINC COBALT	OLIVE DRAB GREEN	ASTM B840 Grade 6; Type D; Conductive -65°C to +175°C	350
MB	-	NICKEL ALUMINIUM BRONZE	UNPLATED	BRIGHT METAL	Conductive; -65°C to +200°C	1000
K	S	STAINLESS STEEL	PASSIVATED	BRIGHT METAL	Conductive; -65°C to +200°C	1000
Y	F	ALUMINIUM ALLOY	CADMUM	YELLOW	AMS-QQ-P-416 Type II; Class 2; Conductive -65°C to +175°C	1000

# RB12H MEMORY RING ADAPTOR

CONNECTOR INTERFACE – H: MIL-DTL-38999 SERIES III & IV

SPIN COUPLING



# RB12H MEMORY RING ADAPTOR

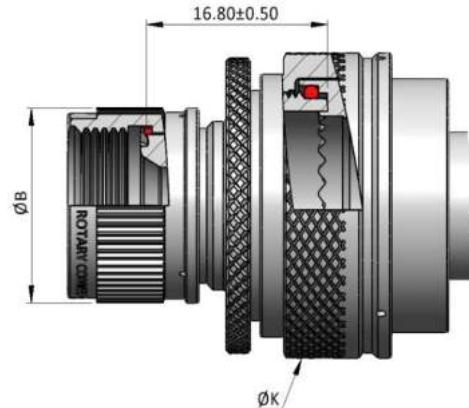
CONNECTOR INTERFACE – H: MIL-DTL-38999 SERIES III & IV

SPIN COUPLING

TABLE 1 : BACK SHELL DIMENSIONS

SHELL SIZE	ØB MAX	MAX ENTRY	C	D	W	T	E	FOR STEEL AND BRONZE MATERIAL ONLY		
			±0.50	±0.50	±0.50	±0.50	±0.50	W	T	E
09	18.00	04	12.00	26.80	21.00	14.00	26.20	21.20	16.30	26.40
11	21.00	07	12.50	27.50	24.00	15.50	27.95	24.30	17.20	28.20
13	24.50	08	13.10	28.00	27.00	17.00	29.45	28.30	19.40	29.70
15	29.00	10	13.50	29.00	31.00	19.50	31.00	31.10	21.00	31.20
17	32.50	12	14.50	29.70	34.00	21.00	32.70	34.20	22.80	32.90
19	35.50	14	15.50	30.50	35.00	20.00	34.25	38.50	25.30	34.50
21	37.00	16	16.10	30.90	38.00	21.50	35.80	40.70	26.10	36.10
23	40.00	18	16.50	31.10	42.00	24.00	37.40	43.70	27.60	37.60
25	43.50	20	17.00	32.10	45.00	25.50	38.90	46.40	29.10	39.10

ENTRY SIZE	ØZ MIN	ØS	ØY	ØK
			±0.30	MAX
04	6.35	9.49 ±0.04	14.00	NA
05	7.92	11.06 ±0.04	15.50	21.00
06	9.53	12.66 ±0.04	17.10	21.00
07	11.10	14.21 ±0.07	18.70	21.00
08	12.70	15.81 ±0.07	20.30	24.50
10	15.88	18.96 ±0.08	23.50	29.00
12	19.05	22.14 ±0.08	26.70	32.50
14	22.23	25.30 ±0.08	29.80	35.50
16	25.40	28.48 ±0.08	33.00	37.00
18	28.58	31.65 ±0.08	36.20	40.00
20	31.75	34.83 ±0.08	39.40	43.50
22	34.93	37.98 ±0.08	42.50	48.50
24	38.10	41.15 ±0.08	45.70	52.10



NOTE: All back shells will be supplied in style 2 as shown in above figure when it exceeds the maximum entry size given in the table. For style 2 dimensions consult factory.

## APPLICATION NOTES:

1. Part supplied above maximum entry will qualify as style 2 and will be supplied in same.
2. Adaptor is captivated in coupling nut body and can rotate freely.
3. To order memory locking ring along with the adaptor contact Sales.

# RB12F MEMORY RING ADAPTOR

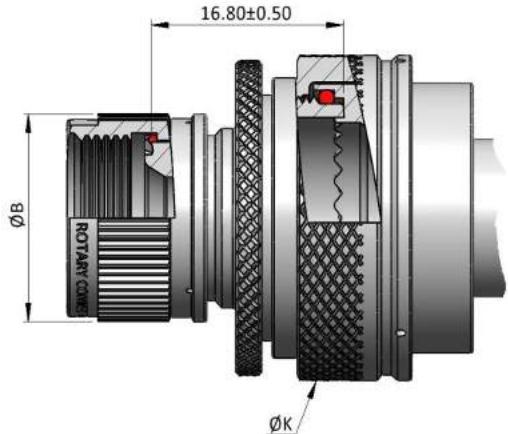
CONNECTOR INTERFACE – F: MIL-DTL-38999 SERIES I & II

SPIN COUPLING

TABLE 1 : BACK SHELL DIMENSIONS

SHELL SIZE	ØB MAX	MAX ENTRY	C	D	W	T	E	FOR STEEL AND BRONZE MATERIAL ONLY		
			±0.50	±0.50	±0.50	±0.50	±0.50	W	T	E
08	18.30	04	16.40	26.80	21.00	14.00	26.20	21.20	16.30	26.40
10	21.50	07	17.20	27.50	24.00	15.50	27.95	24.30	17.20	28.20
12	24.50	08	17.60	28.00	27.00	17.00	29.45	28.30	19.40	29.70
14	27.80	10	18.50	29.00	31.00	19.50	31.00	31.10	21.00	31.20
16	30.80	12	19.20	29.70	34.00	21.00	32.70	34.20	22.80	32.90
18	34.10	14	19.60	30.50	35.00	20.00	34.25	38.50	25.30	34.50
20	37.30	16	20.40	30.90	38.00	21.50	35.80	40.70	26.10	36.10
22	40.50	18	20.80	31.10	42.00	24.00	37.40	43.70	27.60	37.60
24	43.70	20	21.70	32.10	45.00	25.50	38.90	46.40	29.10	39.10

ENTRY SIZE	ØZ MIN	ØS	ØY	ØK
			±0.30	MAX
04	6.35	9.49 ±0.04	14.00	NA
05	7.92	11.06 ±0.04	15.50	21.00
06	9.53	12.66 ±0.04	17.10	21.00
07	11.10	14.21 ±0.07	18.70	21.00
08	12.70	15.81 ±0.07	20.30	24.50
10	15.88	18.96 ±0.08	23.50	29.00
12	19.05	22.14 ±0.08	26.70	32.50
14	22.23	25.30 ±0.08	29.80	35.50
16	25.40	28.48 ±0.08	33.00	37.00
18	28.58	31.65 ±0.08	36.20	40.00
20	31.75	34.83 ±0.08	39.40	43.50
22	34.93	37.98 ±0.08	42.50	48.50
24	38.10	41.15 ±0.08	45.70	52.10



NOTE: All back shells will be supplied in style 2 as shown in above figure when it exceeds the maximum entry size given in the table. For style 2 dimensions consult factory.

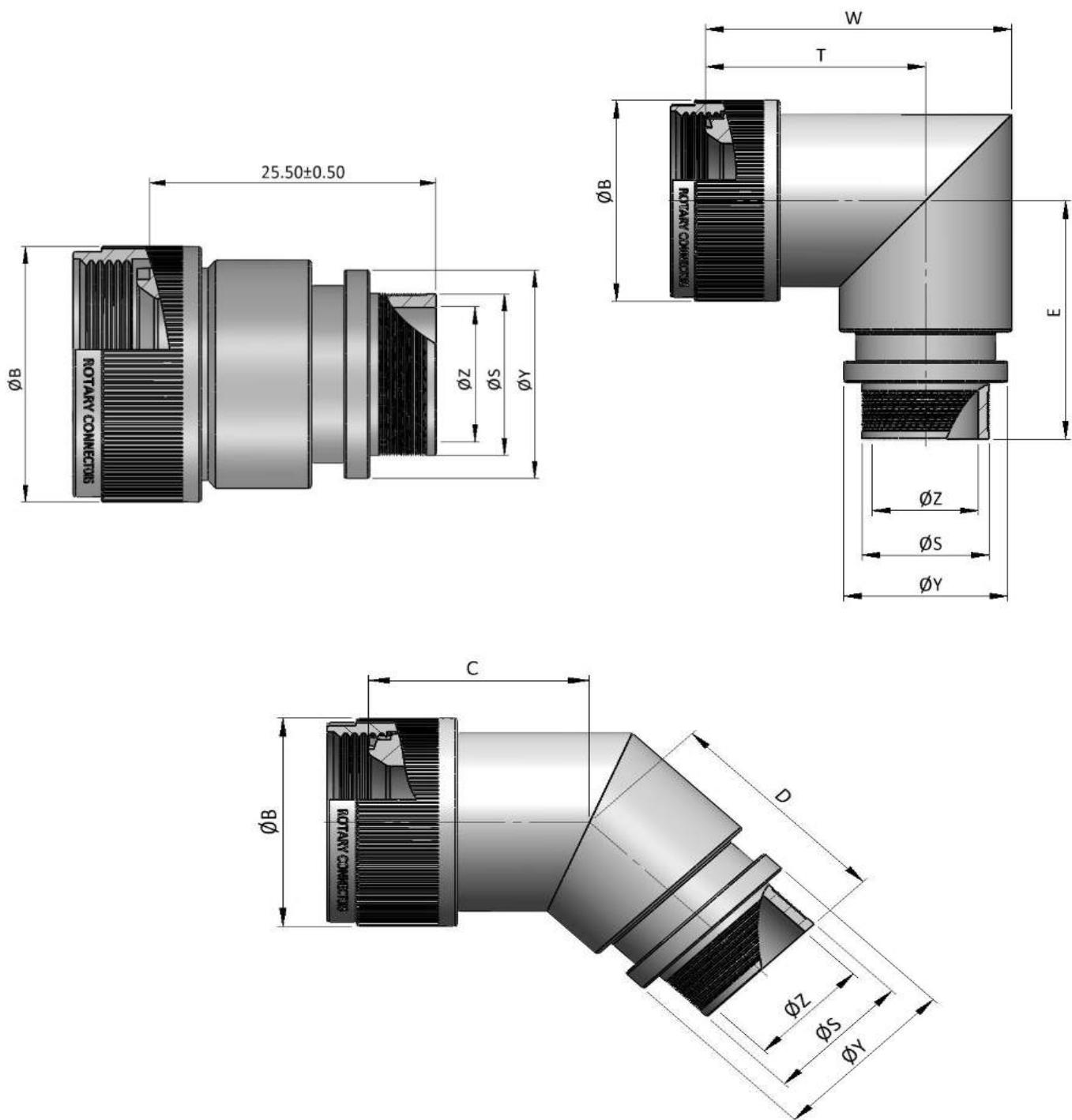
## APPLICATION NOTES:

1. Part supplied above maximum entry will qualify as style 2 and will be supplied in same.
2. Adaptor is captivated in coupling nut body and can rotate freely.
3. To order memory locking ring along with the adaptor contact Sales.

# RB12A MEMORY RING ADAPTOR

CONNECTOR INTERFACE – A: MIL-DTL-26482 SERIES II

SPIN COUPLING



# RB12A MEMORY RING ADAPTOR

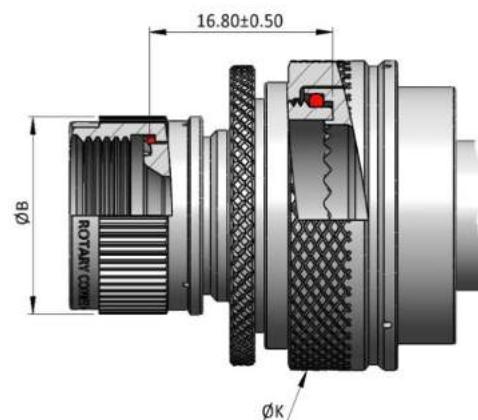
CONNECTOR INTERFACE – A: MIL-DTL-26482 SERIES II

SPIN COUPLING

TABLE 1 : BACK SHELL DIMENSIONS

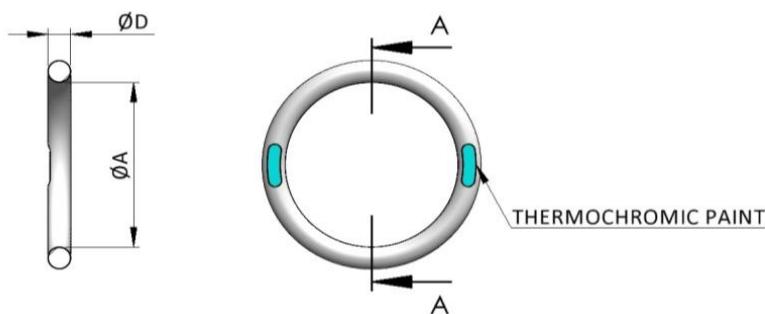
SHELL SIZE	ØB MAX	MAX ENTRY	C	D	W	T	E	FOR STEEL AND BRONZE MATERIAL ONLY		
			±0.50	±0.50	±0.50	±0.50	±0.50	W	T	E
08	15.60	04	16.60	26.80	24.50	17.50	26.20	22.40	17.50	26.20
10	18.60	06	16.80	27.50	26.50	17.80	28.00	25.00	18.80	28.00
12	21.70	08	17.30	28.00	29.00	18.70	29.50	28.30	20.40	29.50
14	24.90	08	18.10	29.00	30.50	19.00	30.30	30.40	21.50	31.00
16	28.20	10	19.00	29.70	34.00	21.00	32.70	33.50	23.00	32.70
18	30.90	12	19.20	30.50	37.00	23.50	32.70	35.50	24.00	32.70
20	34.10	14	20.10	30.90	42.00	27.00	34.30	38.80	25.70	34.30
22	37.30	16	20.30	31.10	44.00	27.00	35.80	41.90	27.20	35.80
24	40.40	18	21.80	32.10	45.00	27.00	37.40	44.80	28.70	37.40
28	50.0	22	23.30	32.50	54.20	31.40	41.90	50.70	31.60	41.90
32	56.30	24	25.00	29.30	60.90	36.40	45.30	60.00	33.50	45.30
36	62.70	28	26.20	30.70	67.20	38.00	48.40	65.50	36.00	48.40

ENTRY SIZE	ØZ MIN	ØS	ØY
			±0.30
04	6.35	9.49 ±0.04	14.00
05	7.92	11.06 ±0.04	15.50
06	9.53	12.66 ±0.04	17.10
07	11.10	14.21 ±0.07	18.70
08	12.70	15.81 ±0.07	20.30
10	15.88	18.96 ±0.08	23.50
12	19.05	22.14 ±0.08	26.70
14	22.23	25.30 ±0.08	29.80
16	25.40	28.48±0.08	33.00
18	28.58	31.65±0.08	36.20
20	31.75	34.83±0.08	39.40
22	34.93	37.98±0.08	42.50
24	38.10	41.15±0.08	45.70



NOTE: All back shells will be supplied in style 2 as shown in above figure when it exceeds the maximum entry size given in the table. For style 2 dimensions consult factory.

# MEMORY RING DIMENSIONS

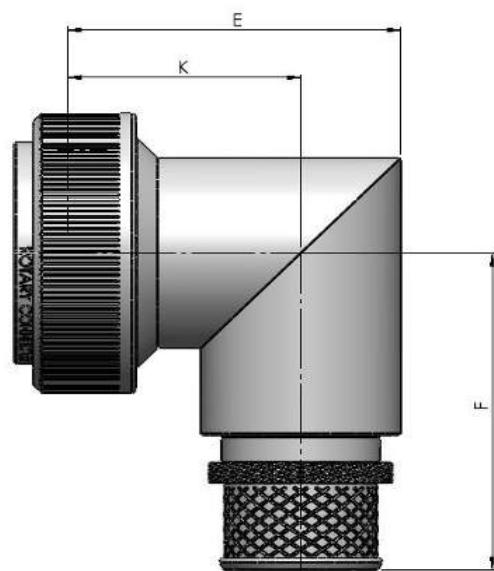
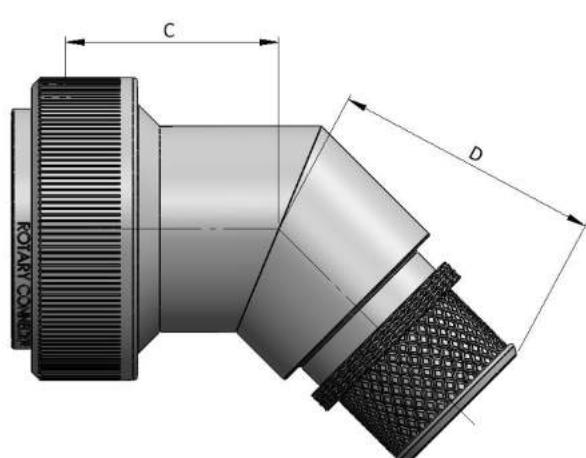
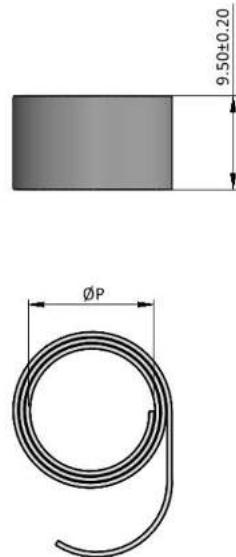
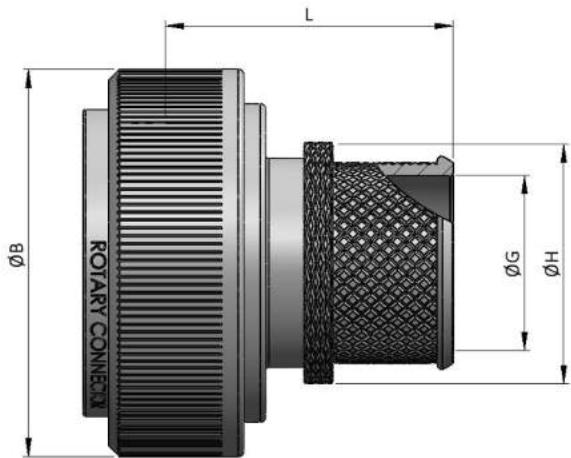


PART NUMBER	ØA		ØD ±0.13
	MIN AS SUPPLIED	MAX FREE RECOVERED	
RA04AI	10.08	9.63	1.85
RA04BI	10.57	10.11	1.85
RA05AI	11.68	11.18	1.85
RA05BI	12.17	11.63	1.85
RA06AI	13.28	12.68	1.85
RA06BI	13.92	13.28	1.85
RA07AI	14.88	14.20	1.85
RA07BI	15.39	14.68	1.85
RA08AI	16.51	15.75	1.85
RA08BI	17.02	16.23	1.85
RA10AI	19.86	18.90	1.85
RA10BI	20.37	19.38	1.85
RA10CI	21.08	20.09	1.85
RA12AI	23.17	22.02	1.85
RA12BI	23.65	22.50	1.85
RA12CI	24.38	23.17	1.85
RA14AI	26.42	25.10	1.85
RA14BI	26.92	25.58	1.85
RA14CI	27.66	26.24	1.85
RA16AI	29.74	28.22	1.85
RA16BI	30.25	28.68	1.85
RA16CI	30.89	29.31	1.85
RA18AI	33.05	31.34	1.85
RA18BI	33.53	31.80	1.85
RA20AI	36.32	34.47	1.85
RA20BI	36.83	34.95	1.85
RA22AI	39.19	37.16	2.13
RA22BI	39.65	37.62	2.13
RA24AI	42.49	40.31	2.13
RA24BI	42.95	40.77	2.13
RA28AI	49.07	46.68	2.13
RA28BI	49.53	47.19	2.13

# RB18 SPRING ADAPTOR

CONNECTOR INTERFACE – H/F/A

SPIN COUPLING



# RB18 SPRING ADAPTOR

CONNECTOR INTERFACE – H/F/A

SPIN COUPLING

TABLE 1 : BACKSHELL DIMENSIONS

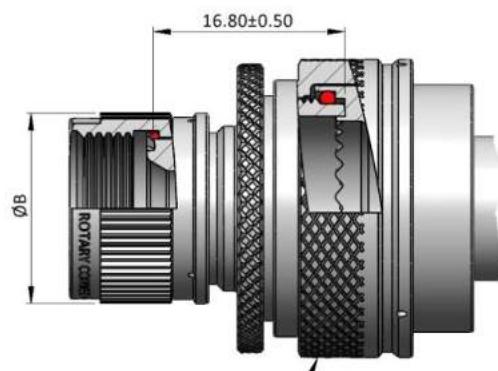
SHELL SIZE	ØB	L FOR INTERFACE			C MAX	D MAX	K MAX	E MAX	F MAX
		H	F	A					
09/08	18.30	30.00	30.00	32.00	14.60	26.40	18.50	25.70	31.50
11/10	21.50	30.00	30.00	32.00	15.20	29.40	19.60	26.70	32.70
13/12	24.50	30.00	30.00	32.00	16.00	27.30	21.10	31.20	33.70
15/14	27.80	30.00	30.00	32.00	16.20	30.00	25.00	37.20	35.50
17/16	30.80	30.00	30.00	32.00	17.00	30.50	27.20	40.20	37.40
19/18	34.10	30.00	30.00	32.00	17.50	30.90	27.50	44.70	39.00
21/20	37.30	30.00	30.00	32.00	18.50	31.60	31.00	49.20	41.60
23/22	40.50	30.00	30.00	32.00	19.10	32.30	32.00	51.70	42.10
25/24	43.70	30.00	30.00	32.00	19.30	32.90	30.50	53.20	45.10

TABLE 2 : ENTRY DIMENSIONS

ENTRY SIZE	ØG MIN	ØH MAX	SPRING REF
03	4.70	13.90	CS050
04	6.30	13.90	CS050
05	7.90	15.50	CS100
06	9.50	17.20	CS100
07	11.10	18.70	CS100
08	12.70	20.30	CS200
09	14.20	21.90	CS200
10	15.80	23.50	CS200
11	17.40	25.10	CS200
12	19.00	26.70	CS300
13	20.60	28.30	CS300
14	22.20	29.90	CS300
15	23.80	31.50	CS300
16	25.40	33.10	CS300
17	27.00	34.70	CS400
18	28.60	36.30	CS400
19	30.20	37.90	CS400
20	31.80	39.50	CS400
21	33.30	41.10	CS400
22	35.00	42.70	CS400
23	36.50	44.30	CS400
24	38.10	45.90	CS400

TABLE 3 : CONSTANT FORCE SPRING DIMENSIONS

SPRING NUMBER	ØP MAX
CS050	7.50
CS100	9.10
CS200	12.80
CS300	17.90
CS400	21.80



NOTE: All back shells will be supplied in style 2 as shown in above figure when it exceeds the maximum entry size given in the table. For style 2 dimensions consult factory.

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