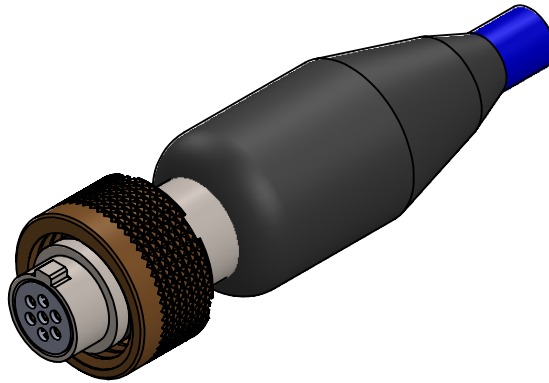


‘W’ Electrical Connector Subsea / Underwater / Marine



Introduction:

CRE has developed a range of metal shell connectors over the years focused on delivering high reliability in tough environments. The design offers a high integrity sealing arrangement, metal keyways, multiple options on size, pin quantity, current rating along with our ability to design specific solutions for your application. They are designed for heavy-duty use in the most rigorous underwater applications on the planet. Made of 316 stainless steel or custom built with any material specified, they come as standard with high open face pressure resistance. These robust and versatile connectors are rated to 6,000m and are designed for use with moulded cables and tailored for the heaviest power, signal and electro-mechanical applications.

The most common applications:

- ROV
- Dive Bell Connectors
- Underwater Cameras and Lights
- Underwater Thruster
- Strain Termination

Key Feature:

- Multi size shell body
- Up to 7 contacts
- Pressure up to 9,300 Psi (Mated)
- Open face pressure up to 9,300 Psi
- Oil filled available as standard (OF)
- Up to 600 VDC
- Up to 11 amps - single pin see page 11



Options:

- Contact sizes for power/data requirement
- Bespoke design/configuration to suit customer requirements at no extra cost
- Available in alternative materials: Aluminium, Titanium etc.

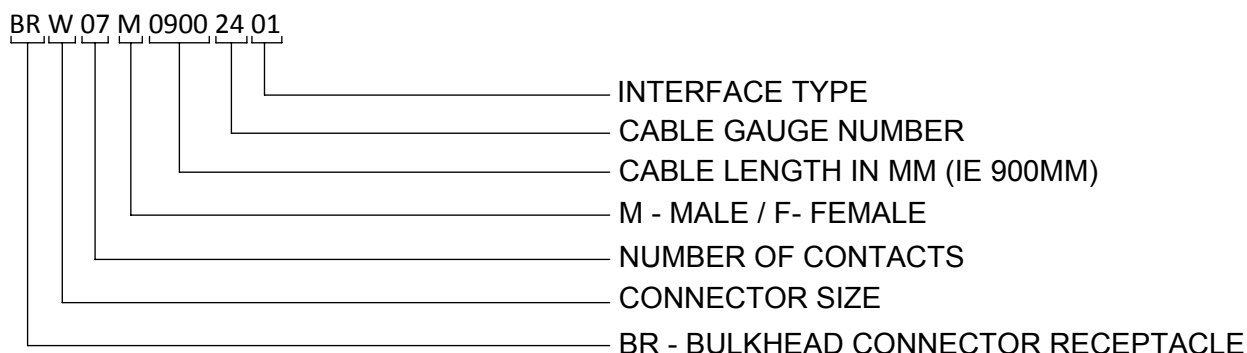
Testing:

- Pressure testing up to 9,300 Psi
- Durability testing with 100 mate and re-mate cycles
- Open face pressure testing up to 9,300 Psi

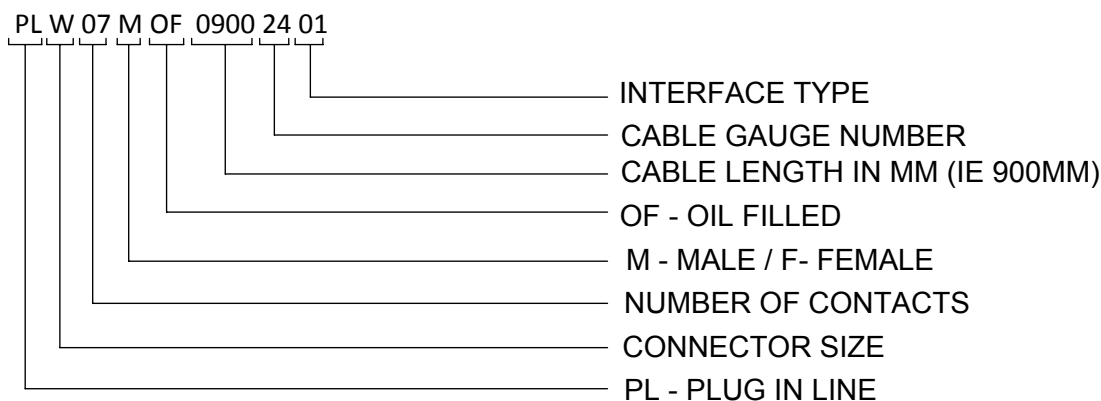
Notes:

For more information's contact CRE.

Part Numbering System - Bulkhead Example



Part Numbering System - Connector Example



Standard Mechanical Specification:

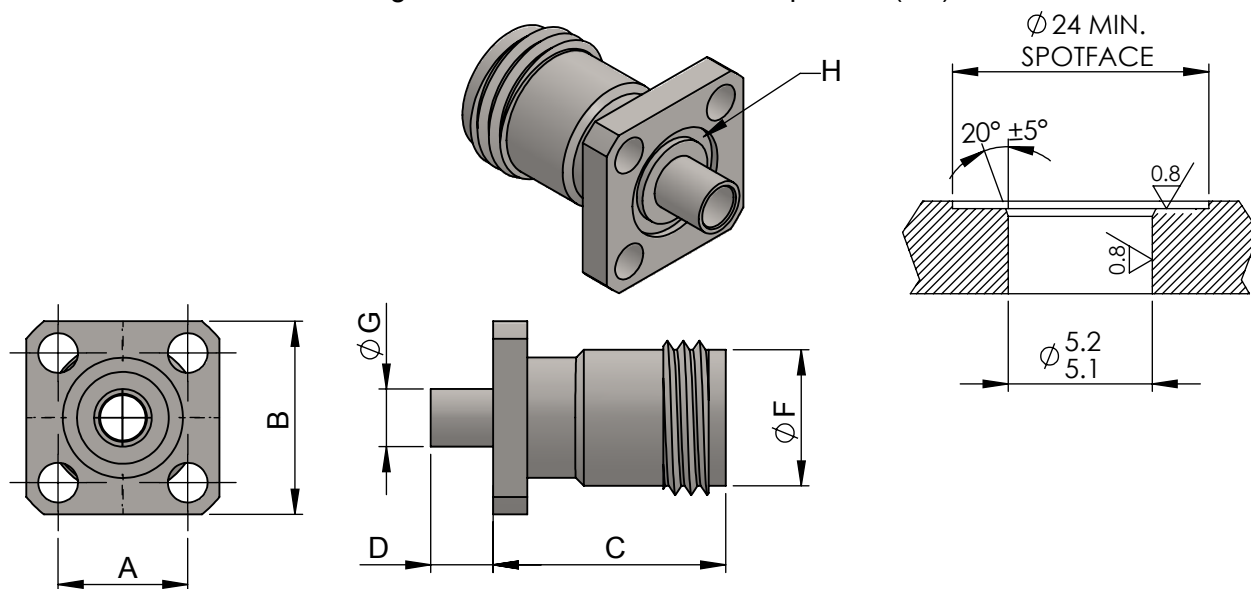
COMPONENT	MATERIAL
Shell Body	Stainless steel 316L
Contact Insert	Epoxy / Peek
Electrical Contacts	Leaded Nickel Copper C97 or K41
Plating Details	1um Acid Gold over 2.5um Nickle Copper Flash
Retaining Nut	Stainless steel / Aluminium Bronze
'O'Rings	Nitrile NI70
Backing Washer	Acetal

NOTES:

Contact CRE for special order materials.

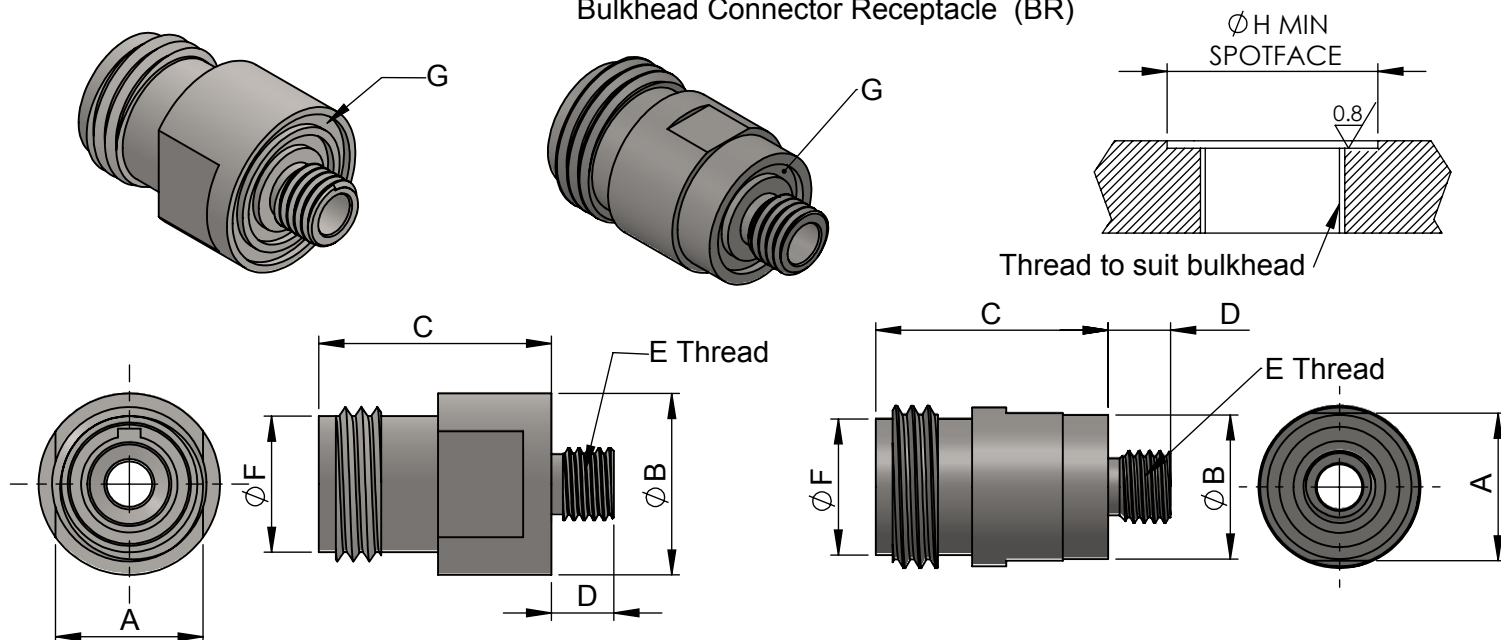
Reference Dimensions 'W' Connector

Flanged Bulkhead Connector Receptacle (FR)



A	B	C	D	E	F	G	H - O-ring	TYPE
11.4	17	18.5	5.5	3.5	12	5.08	8 x 1	01

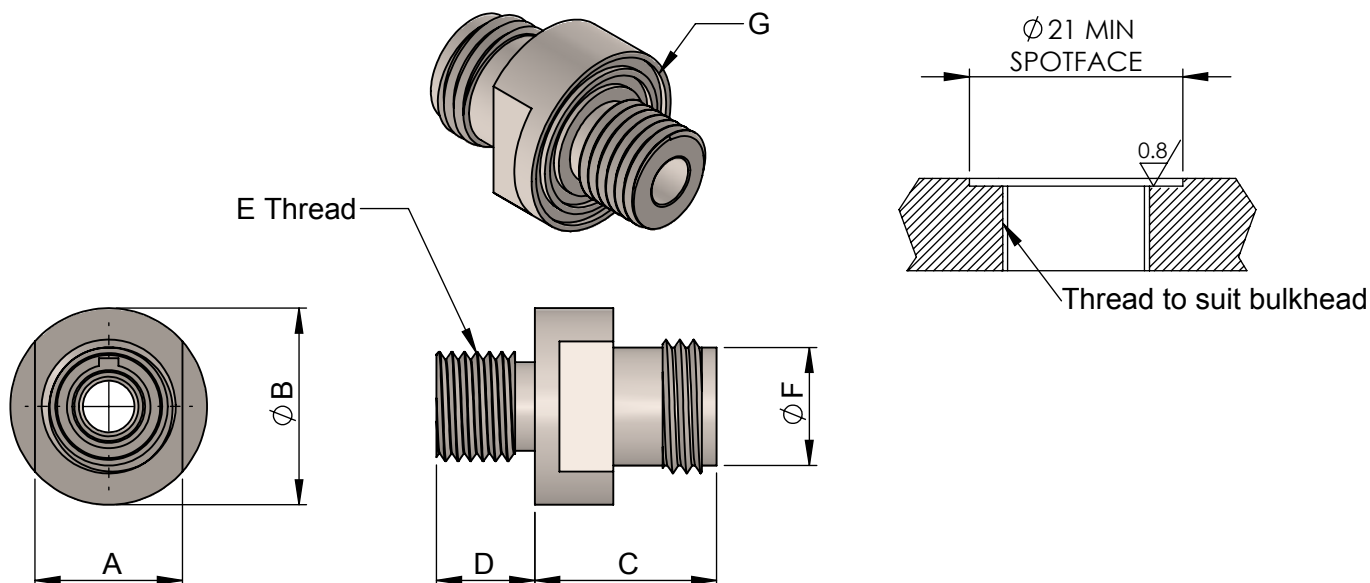
Bulkhead Connector Receptacle (BR)



A	B	C	D	E	F	G - O-ring	H	TYPE
13	16	18.5	5.5	1/4" - UNF	12	12 ; 8 x 1	17	01
12.5	14	20.5	5.5	1/4" - UNF	12	10.5 ; 7 x 1	15	02
12.5	14	20.5	5.5	1/8" BSPP	12	10 x 1	15	05
13	12.7	20.5	5.5	1/4" - UNF	12	8 x 1	14	06

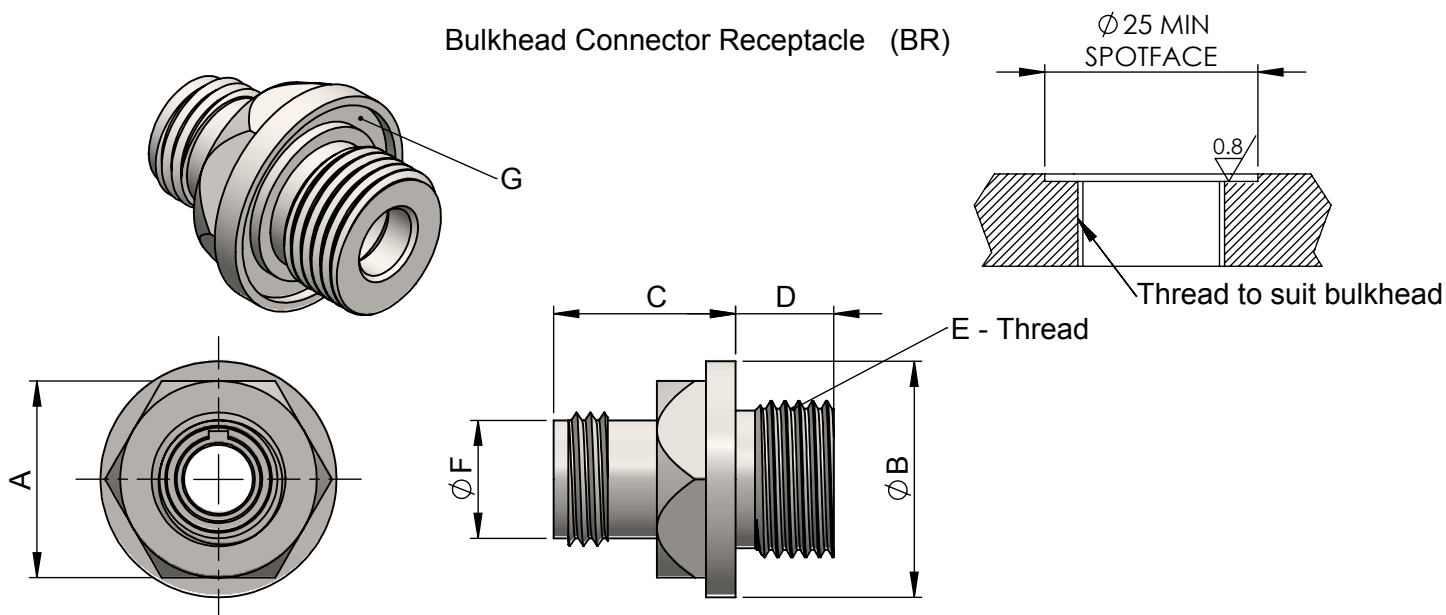
Reference Dimensions 'W' Connector

Bulkhead Connector Receptacle (BR)



A	B	C	D	E	F	G - O-ring	TYPE
15	20	18.5	10	7/16" -UNF	12	16 x 1	03
15	20	18.5	10	1/4" BSPP	12	14 x 1.5	04

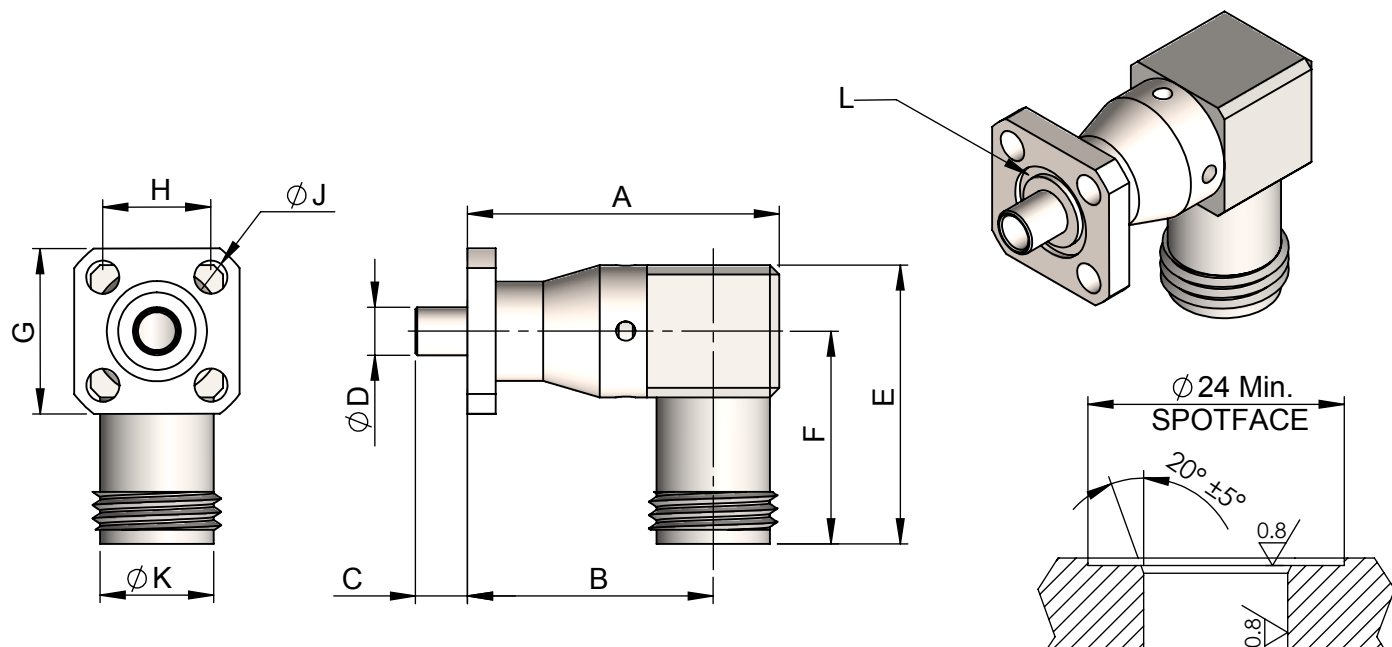
Bulkhead Connector Receptacle (BR)



A	B	C	D	E	F	G	TYPE
20	24	18.5	10	5/8" - UNF	12	BS017	07

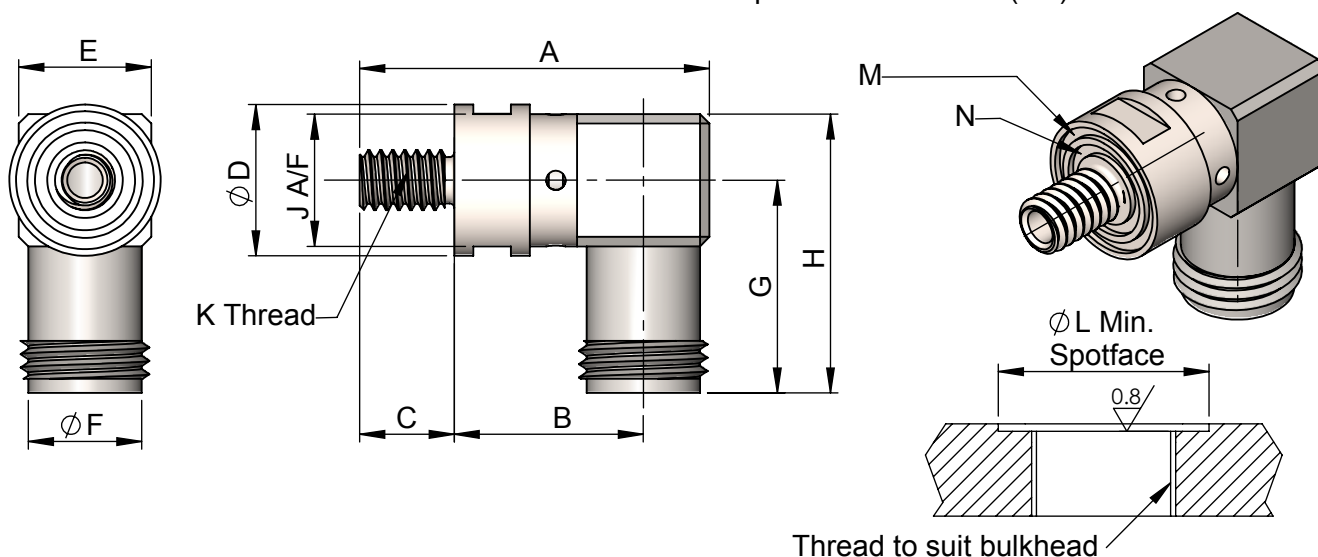
Reference Dimensions 'W' Connector

Low Profile 90° Bulkhead Connector Receptacle - Flanged (FR)



A	B	C	D	E	F	G	H	J	K	L - O-ring	TYPE
33	26	5.5	5.08	29.5	22.5	17.5	11.4	3.5	12	8 x 1	LPF01

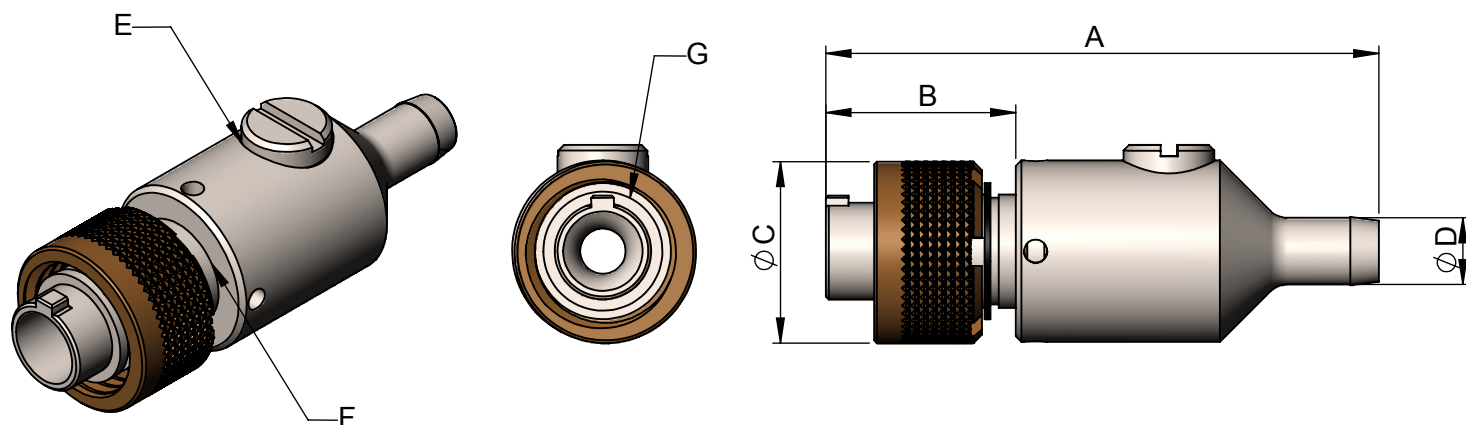
Low Profile 90° Bulkhead Connector Receptacle - Threaded (BR)



A	B	C	D	E	F	G	H	J	K	L	M-O'RING	N-O'RING	TYPE
37	20	10	16	14	12	22.5	29.5	14	1/4"-28 UNF	18	12 X 1	8 X 1	LPT01
37	20	10	14	14	12	22.5	29.5	12	1/4"-28 UNF	16	10 X 1	7 X 1	LPT02
37	20	10	20	14	12	22.5	29.5	17	7/16"-20 UNF	22	16 X 1	12 X 1	LPT03

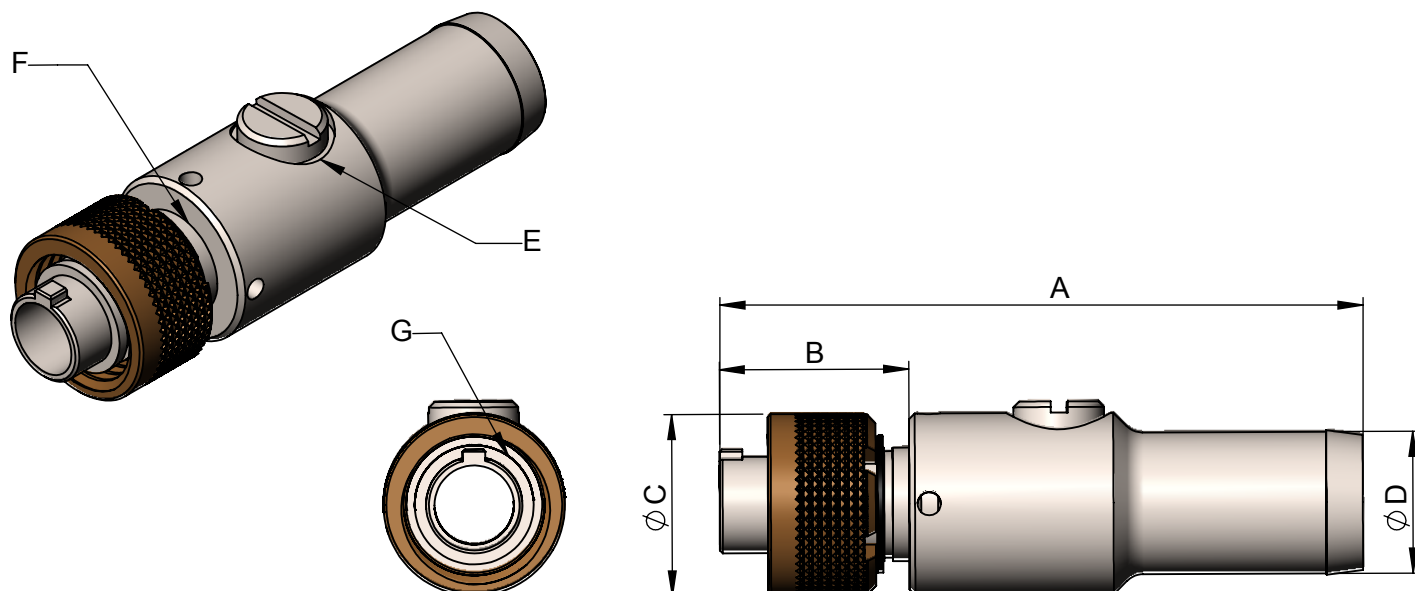
Reference Dimensions 'W' Connector

Backshell Cable Connector Receptacle (PL)



A	B	C	D	E - 'O'Ring	F - 'O'Ring	G - 'O'Ring	TYPE
48.75	16.75	16	9.5	4 x 1	10 x 1	8.5 x 1	01

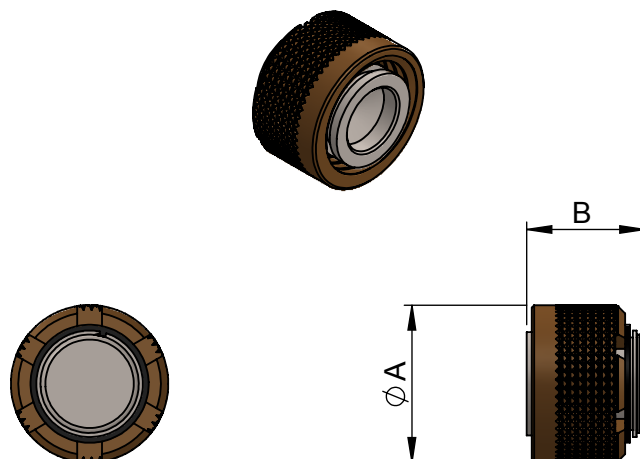
Backshell Cable Connector Receptacle (PL)



A	B	C	D	E	F	G	TYPE
57	16.75	16	12.5	4 x 1	10 x 1	8.5 x 1	02

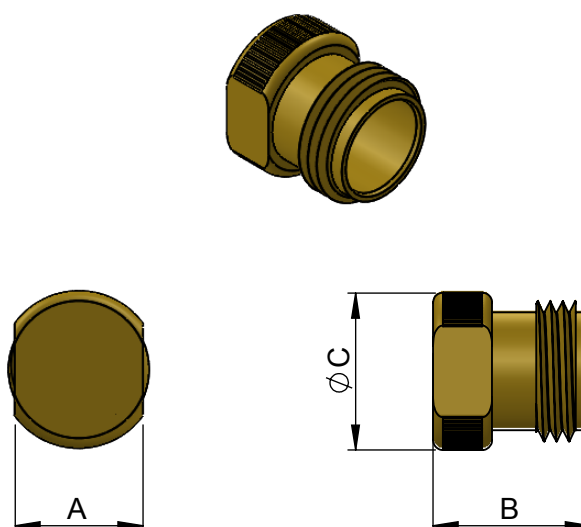
Reference Dimensions 'W' Connector

Mini Connector Blanking Plug - PLWBC



A	B	D - O-ring
16	12	8.5 x 1

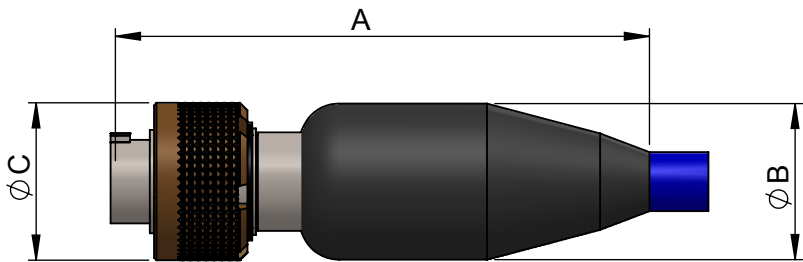
Mini Connector Blanking Cap - BRWBC



A	B	C
13	16	16

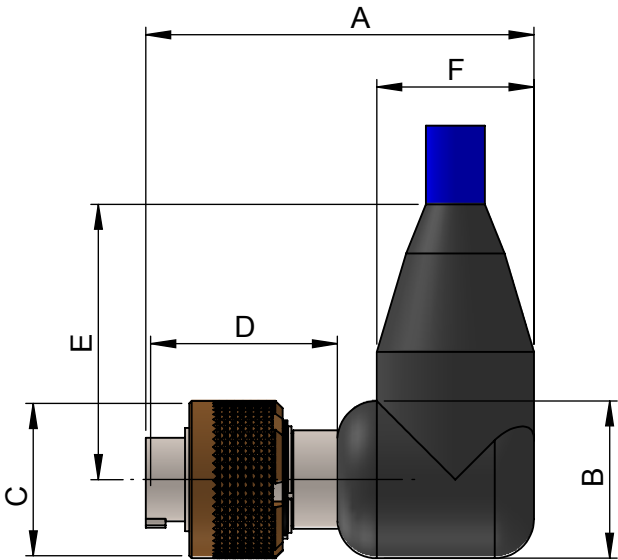
Reference Dimensions 'W' Connector

Moulded Cable Connector Receptacle - Straight



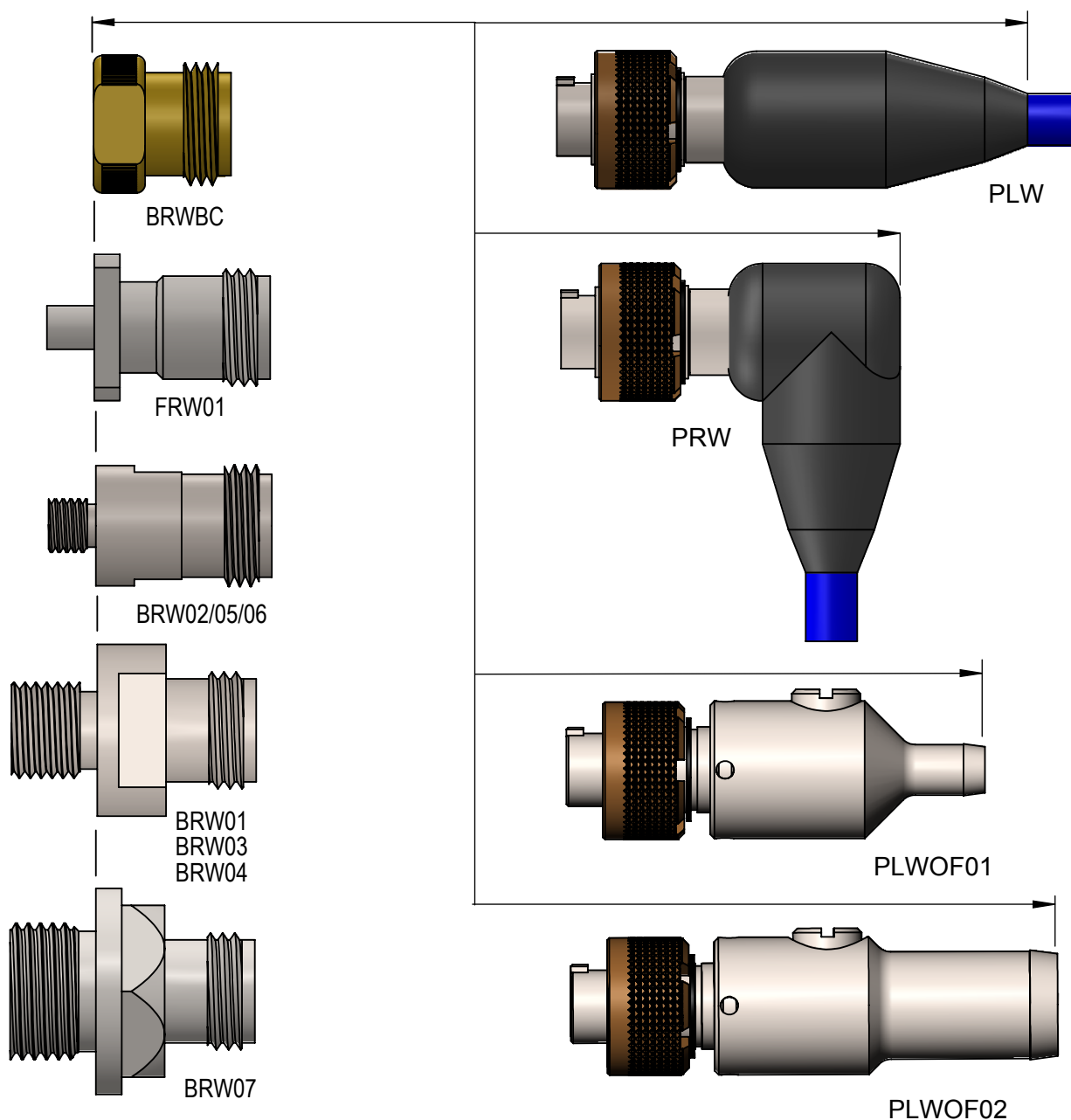
A	B	C
56	16	16

Moulded Cable Connector Receptacle - 90°



A	B	C	D	E	F
39.5	16	16	19.5	28	16

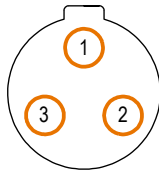
Reference Dimensions 'W' Connector



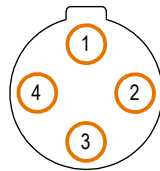
BULKHEAD REF.	PLW	PRW	PLWOF01	PLWOF02
FRW01	64	48	60	68.25
BRW01/03/04	64	48	60	68.25
BRW02/05/06/07	66	50	62	70.25
BRWBC	61.5	45.5	57.5	65.75

Note: Step files for design purposes available from engineering@CRE-marine.com

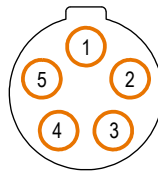
Pin Face View



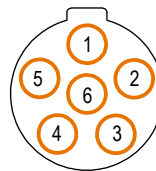
3 WAY
600 VDC



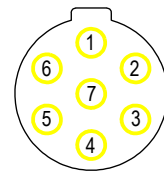
4 WAY
600 VDC



5 WAY
600 VDC



6 WAY
600 VDC

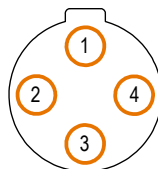


7 WAY
600 VDC

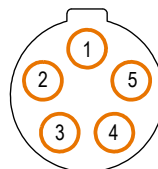
Socket Face View



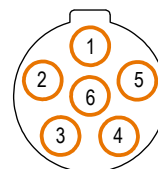
3 WAY
600 VDC



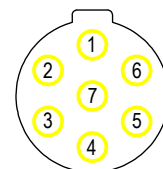
4 WAY
600 VDC



5 WAY
600 VDC



6 WAY
600 VDC



7 WAY
600 VDC

○ 0.75 mm Pin ○ 1 mm Pin

For current carrying capacity and wire recommendations see page 11

Current Capacity and Wire Recommendations

- The current rating maybe impacted by cable selection and the ambient temperature.
- The amount of heat generated should not exceed the maximum temperature rating of the insulation material.
- Heat dissipation is lessened as the number of individually insulated conductors bundled together is increased.
- A derating factor must be applied for bundled conductors. See chart below.
- Current ratings shown below are for single conductors in free air at 30deg C ambient temp.
- Where applicable, alternative pin & current ratings are available. See chart below.
- Voltage up to 1000v
- For different pin configurations contact CRE

Pin Diameter	0.75	1.0
Wire Size	24 awg	22 awg
Current	8 amps	11 amps
Current ratings based on PTFE type C cable		

Derating Factors for Bundled Conductors	
Bundle #	Derating Factor (x Amps)
2 - 5	0.8
6 - 15	0.7
16 - 30	0.5

Notes:

- Larger solder bucket options are not available on all contact configurations, please contact CRE Engineering to confirm your requirement is possible.
- Final wiring detail depends on through bore of Interface chosen, please contact CRE Engineering to confirm your requirement is possible.