



# PRODUCT TYPE RA\*\*90

## Metallic 90 Degree Rotating Adaptors and Reducers

Ex db : Ex eb : Ex nR : Ex ta : IP66 : IP68 Class I Zone 1 AEx db : AEx eb : AEx ta



### PART NUMBERS:

|    |      |   |   |   |
|----|------|---|---|---|
| RA | MF90 | O | B | F |
|    | MM90 |   | S |   |
|    | FF90 |   |   |   |



### PRODUCT DESCRIPTION

"RA\*\*90" Series Dual Certified Right Angled Rotating Adaptors are designed to protect cables when installed in confined spaces where the cable may otherwise be subject to excessive bending and / or stress. The series is available with Male/Male, Male/Female or Female/Female connection threads. Approved for use in mining and surface applications, they maintain IP66 & IP68 for IEC type applications and Class I Zone 1 and Type 4X/6P for CEC / NEC type applications.

### COMPLIANCE STANDARDS:

EN 60079-0, EN 60079-1, EN 60079-7, EN 60079-15, EN 60079-31  
IEC 60079-0, IEC 60079-1, IEC 60079-7, IEC 60079-15, IEC 60079-31 & IEC 60529  
C22.2 (see certificate), ANSI/UL 514B, ANSI/UL 60079-0/1/7, ANSI/ISA 60079-31, UL50E

EXAMPLE PART NUMBERING:  
RAMF90BFF/NP/M20/M20

|              |  |
|--------------|--|
| <b>RA</b>    | Rotating Thread converting Adaptor/Reducer                       |
| <b>MF90</b>  | Male / Female (MF90) - Male / Male (MM90) - Female/Female (FF90) |
| <b>O</b>     | No IP O-ring   |
| <b>B</b>     | Brass (B) - Stainless Steel (S)                                  |
| <b>F</b>     | Multiple Certification   |
| <b>K-V-H</b> | Locknut & Nylon (K) - Fibre (V) - PTFE (H) IP Washer             |
| <b>S</b>     | Including Serrated Washer  |
| <b>1</b>     | Quantity per kit   |
| <b>NP</b>    | Nickel Plated  |
| <b>M20</b>   | Male Entry Thread  |
| <b>M20</b>   | Female Entry Thread  |

OPTIONAL ACCESSORIES:

|                        |  |
|------------------------|--|
| <b>IP Washers</b>      | (N) Nylon (ACNSW) - (J) Fibre (ACFSW) - (Z) PTFE (ACPSW) |
| <b>Earth Tag</b>       | (T) Brass (ACBET) - St-Steel (ACSET)                     |
| <b>Locknut</b>         | (L) Brass (ACBLN) - St-Steel (ACSLN)                     |
| <b>Serrated Washer</b> | (S) Stainless Steel (ACSSW)                              |

CERTIFICATION:

|                     |   |
|---------------------|---|
| <b>ATEX</b>         | I M2 II 1D 2G Ex db I Mb / Ex db IIC Gb / Ex eb I Mb / Ex eb IIC Gb / Ex ta IIIC Da<br>II 3G Ex nR IIC Gc |
| <b>IECEX</b>        | Ex db I Mb / Ex db IIC Gb / Ex eb I Mb / Ex eb IIC Gb / Ex nR IIC Gc / Ex ta IIIC Da                      |
| <b>CEC - Canada</b> | Ex db IIC Gb / Ex eb IIC Gb / Ex ta IIIC Da<br>Type 4X / 6P   |
| <b>NEC - USA</b>    | Class I Zone 1 AEx db IIC Gb / Ex eb IIC Gb<br>Zone 20 AEx ta IIIC Da<br>Type 4X / 6P                     |
| <b>CCC - China</b>  | Ex d I Mb / Ex d IIC Gb / Ex e I Mb / Ex e IIC Gb / Ex nR IIC Gc / Ex tD A20                              |
| <b>CCoE - India</b> | Ex db I Mb / Ex db IIC Gb / Ex eb I Mb / Ex eb IIC Gb / Ex nR IIC Gc                                      |
| <b>ABS</b>          | Specified ABS Rules   |
| <b>LLOYD'S</b>      | Ex db I Mb / Ex db IIC Gb / Ex eb I Mb / Ex eb IIC Gb / Ex nR IIC Gc / Ex ta IIIC Da                      |

CERTIFICATION NO.:

|                     |                                   |
|---------------------|-----------------------------------|
| <b>ATEX</b>         | CML 19ATEX1330X & CML 19ATEX4331X |
| <b>IECEX</b>        | IECEX CML 19.0101X                |
| <b>CEC - Canada</b> | CSA 2310046                       |
| <b>NEC - USA</b>    | CSA 2310046                       |
| <b>CCC - China</b>  | 2021312313000376                  |
| <b>CCoE - India</b> | PESO P494321/5 & P494321/14       |
| <b>ABS</b>          | 20-LD1944057-PDA                  |
| <b>LLOYD'S</b>      | LR2124442TA                       |

|                               |   |
|-------------------------------|---|
| <b>IP RATING:</b>             | IP66, IP68 (2 metres for 24hrs) & Type 4X/6P  |
| <b>OPERATING TEMPERATURE:</b> | Washer - None -60°C to +135°C<br>Washer - Fibre -40°C to +95°C<br>Washer - Nylon -40°C to +135°C<br>Washer - PTFE -60°C to +135°C |
| <b>MATERIALS:</b>             | Brass or Stainless Steel  |
| <b>PLATING:</b>               | Electroless Nickel  |

Male and Female Thread References and Size information can be found on page 77 of our product catalogue. Adaptor and Reducer size information is available on request sales@peppers.co.uk.

Male and female threads are manufactured in accordance with:-

- ISO Metric threads to ISO 965-1, ISO 965-3, BS3643 and IEC 60423
- NPT and NPS threads are in accordance to ANSI B1.20.1
- PG threads to DIN40430
- ET threads to Imperial Conduit BS31
- ISO Pipe Parallel to ISO 228 and BS2779 (BSPP, G, R, PF & Tpy 6)
- ISO Pipe Taper to ISO 7-1 and BS21 (BSPT, Gc, Gk, Rk, PT & Kmpy 6)

NOTES

- Assembly instructions must be read prior to installation and adhered to in full.
- For Ex db applications female threads must comply with clause 5.3 of IEC 60079-1.
- For Ex nR applications parallel entry threads must be installed with a suitable entry thread seal.
- ATEX / IECEX / CSA versions are supplied as standard.

- Peppers supply products with parallel entry threads that conform to the flameproof threaded joint requirements of IEC/EN 60079-1 and other equivalent standards. We usually incorporate a thread run out according to general machining techniques and parts will not have a full form thread for the entire length. Peppers Cable Glands Limited will not be held responsible for clients' installations where this has not been taken into account.