

# FD90 Series

Diagnostic Coupling  
SAE J1502 Interchange



The FD90 Series diagnostic coupling is designed to connect and disconnect pressure gauges to hydraulic systems, eliminating the need for permanent gauges. The maximum operating pressure is 7,000 psi.

## Product Features

- Automatic sleeve for one hand push-to-connect operation
- Flush face valving provides minimal fluid loss and low air inclusion
- Self-sealing valve design allows connection and disconnection at 500 psi
- Broad range of end configurations for system accessibility
- Standard seal material – Buna-N
- Standard seal material – High resistance carbon steel with zinc trivalent plating

## Applications

- Diagnostic pressure testing for hydraulic systems



## Physical Characteristics

| Coupling Size | Max. Operating Pressure |         | Min. Burst Pressure Connected |          | Vacuum Connected Only | Rated Flow |       | Air Inclusion | Fluid Loss |
|---------------|-------------------------|---------|-------------------------------|----------|-----------------------|------------|-------|---------------|------------|
|               | bar                     | (psi)   | bar                           | (psi)    |                       | L/min      | (gpm) |               |            |
| 1/4           | 483                     | (7,000) | 1,931                         | (28,000) | 28                    | 1.89       | (0.6) | 0.02          | 0.10       |

## Dimensions (Female Pipe, Valved)

| Part Number<br>Buna-N | Part Number<br>with Dust Cap<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread   | Type       | Fig. | Dimensions |        |      |        | Hex ① |        |
|-----------------------|----------------------------------------|------------------|------------------|--------------|--------------|----------|------------|------|------------|--------|------|--------|-------|--------|
|                       |                                        |                  |                  |              |              |          |            |      | A          | B      |      |        |       |        |
| FD90-1034-02-04       | FD90-1035-02-04                        | Male             | -04              | 1/4          | 1/8          | 1/8 - 27 | Female NPT | 1    | 43.2       | (1.70) | -    | -      | 15.7  | (0.62) |
| FD90-1021-02-04       | -                                      | Female           | -04              | 1/4          | 1/8          | 1/8 - 27 | Female NPT | 2    | 49.5       | (1.95) | 25.4 | (1.00) | 19.1  | (0.75) |
| FD90-1034-04-04       | FD90-1035-04-04                        | Male             | -04              | 1/4          | 1/4          | 1/4 - 18 | Female NPT | 1    | 48.3       | (1.90) | -    | -      | 19.1  | (0.75) |
| FD90-1021-04-04       | -                                      | Female           | -04              | 1/4          | 1/4          | 1/4 - 18 | Female NPT | 2    | 57.2       | (2.25) | 25.4 | (1.00) | 19.1  | (0.75) |

## Dimensions (Male SAE O-ring, Valved)

| Part Number<br>Buna-N | Part Number<br>with Dust Cap<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread    | Type            | Fig. | Dimensions |        |   |   | Hex ① |        |
|-----------------------|----------------------------------------|------------------|------------------|--------------|--------------|-----------|-----------------|------|------------|--------|---|---|-------|--------|
|                       |                                        |                  |                  |              |              |           |                 |      | A          | B      |   |   |       |        |
| FD90-1044-03-04       | FD90-1004-03-04                        | Male             | -04              | 1/4          | 3/8          | 3/8 - 24  | Male SAE O-ring | 3    | 38.6       | (1.52) | - | - | 15.7  | (0.62) |
| FD90-1044-04-04       | FD90-1004-04-04                        | Male             | -04              | 1/4          | 7/16         | 7/16 - 20 | Male SAE O-ring | 3    | 40.1       | (1.58) | - | - | 15.7  | (0.62) |
| FD90-1044-05-04       | FD90-1004-05-04                        | Male             | -04              | 1/4          | 1/2          | 1/2 - 20  | Male SAE O-ring | 3    | 33.5       | (1.32) | - | - | 15.7  | (0.62) |
| FD90-1044-06-04       | FD90-1004-06-04                        | Male             | -04              | 1/4          | 9/16         | 9/16 - 18 | Male SAE O-ring | 3    | 33.5       | (1.32) | - | - | 17.5  | (0.69) |

## Dimensions (Male Pipe, Valved)

| Part Number<br>Buna-N | Part Number<br>with Dust Cap<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread   | Type     | Fig. | Dimensions |        |   |   | Hex ① |        |
|-----------------------|----------------------------------------|------------------|------------------|--------------|--------------|----------|----------|------|------------|--------|---|---|-------|--------|
|                       |                                        |                  |                  |              |              |          |          |      | A          | B      |   |   |       |        |
| FD90-1012-02-04       | FD90-1045-02-04                        | Male             | -04              | 1/4          | 1/8          | 1/8 - 27 | Male NPT | 4    | 40.6       | (1.60) | - | - | 15.7  | (0.62) |
| FD90-1012-04-04       | FD90-1045-04-04                        | Male             | -04              | 1/4          | 1/4          | 1/4 - 18 | Male NPT | 4    | 37.8       | (1.49) | - | - | 17.5  | (0.69) |

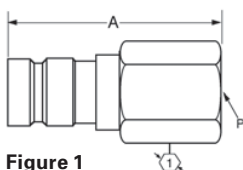


Figure 1

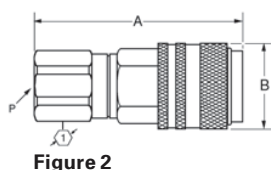


Figure 2

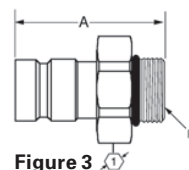


Figure 3

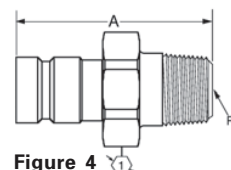


Figure 4

## FD90 Series

Diagnostic Coupling  
SAE J1502 Interchange

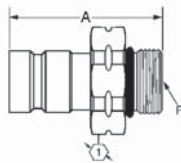


Figure 5

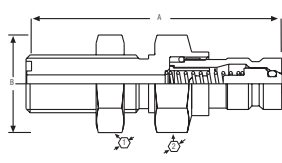


Figure 6

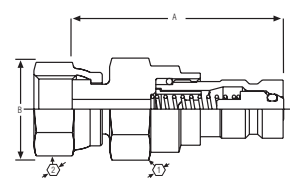


Figure 7

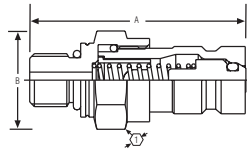


Figure 8

### Dimensions (Metric Male O-ring, Valved)

| Part Number<br>Buna-N | Part Number<br>with Dust Cap<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread  | Type        | Fig. | Dimensions<br>A |        | Dimensions<br>B |      | Hex ① |        |
|-----------------------|----------------------------------------|------------------|------------------|--------------|--------------|---------|-------------|------|-----------------|--------|-----------------|------|-------|--------|
|                       |                                        |                  |                  |              |              |         |             |      | mm              | (in)   | mm              | (in) | mm    | (in)   |
| FD90-1046-06-04       | FD90-1047-06-04                        | Male             | -04              | 1/4          | M14          | M14x1.5 | Male O-ring | 5    | 38.5            | (1.52) | -               | -    | 19.1  | (0.75) |

### Dimensions (Female SAE O-ring, Valved)

| Part Number<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread    | Type              | Fig. | Dimensions<br>A |        | Dimensions<br>B |        | Hex ① |        |
|-----------------------|------------------|------------------|--------------|--------------|-----------|-------------------|------|-----------------|--------|-----------------|--------|-------|--------|
|                       |                  |                  |              |              |           |                   |      | mm              | (in)   | mm              | (in)   | mm    | (in)   |
| FD90-1041-09-04       | Female           | -04              | 1/4          | 7/16         | 7/16 - 20 | Female SAE O-ring | 2    | 55.9            | (2.20) | 25.40           | (1.00) | 19.1  | (0.75) |

### Dimensions (Male ORS Bulkhead, Valved)

| Part Number<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread    | Type              | Fig. | Dimensions<br>A |        | Dimensions<br>B |        | Hex ① |        |
|-----------------------|------------------|------------------|--------------|--------------|-----------|-------------------|------|-----------------|--------|-----------------|--------|-------|--------|
|                       |                  |                  |              |              |           |                   |      | mm              | (in)   | mm              | (in)   | mm    | (in)   |
| FD90-1206-04-04       | Male             | -04              | 1/4          | 9/16         | 9/16 - 18 | Male ORS Bulkhead | 6    | 62.5            | (2.46) | 20.6            | (0.81) | 20.6  | (0.81) |

### Dimensions (Male ORS Bulkhead, Valved)

| Part Number<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread     | Type              | Fig. | Dimensions<br>A |        | Dimensions<br>B |        | Hex ① |        |
|-----------------------|------------------|------------------|--------------|--------------|------------|-------------------|------|-----------------|--------|-----------------|--------|-------|--------|
|                       |                  |                  |              |              |            |                   |      | mm              | (in)   | mm              | (in)   | mm    | (in)   |
| FD90-1061-04-04       | Male             | -04              | 1/4          | 9/16         | 9/16 - 18  | Female ORS Swivel | 7    | 46.5            | (1.79) | 22.1            | (0.87) | 17.5  | (0.69) |
| FD90-1061-06-04       | Male             | -04              | 1/4          | 11/16        | 11/16 - 16 | Female ORS Swivel | 7    | 46.5            | (1.83) | 23.9            | (0.94) | 20.6  | (0.81) |
| FD90-1061-08-04       | Male             | -04              | 1/4          | 13/16        | 13/16 - 16 | Female ORS Swivel | 7    | 49.0            | (1.93) | 27.4            | (1.08) | 23.9  | (0.94) |

### Dimensions (Male Metric O-ring, Valved)

| Part Number<br>Buna-N | Coupling<br>Type | Coupling<br>Size | Body<br>Size | Port<br>Size | Thread | Type          | Fig. | Dimensions<br>A |        | Dimensions<br>B |        | Hex ① |      |
|-----------------------|------------------|------------------|--------------|--------------|--------|---------------|------|-----------------|--------|-----------------|--------|-------|------|
|                       |                  |                  |              |              |        |               |      | mm              | (in)   | mm              | (in)   | mm    | (in) |
| FD90-1090-10-04       | Male             | -04              | 1/4          | M10          | M10x1  | Mertic O-ring | 8    | 40.1            | (1.58) | 18.3            | (0.72) | -     | -    |

### Dust Cap for Male Halves

| Coupling Size | Part Number     |
|---------------|-----------------|
| -04           | FD90-1040-04-04 |



Dust Cap for  
Male Halves



信德迈  
CNMEC TECHNOLOGY

### 联系方式

信德迈科技(北京)有限公司 CNMEC Technology

地址：北京朝阳区望京SOHO-T1-C座2115室

邮编：100102

电话：010 - 8428 2935, 8428 3983

手机：13910962635

传真：010 - 8428 8762

Email：sales@cnmec.biz

Http://www.cnmec.biz