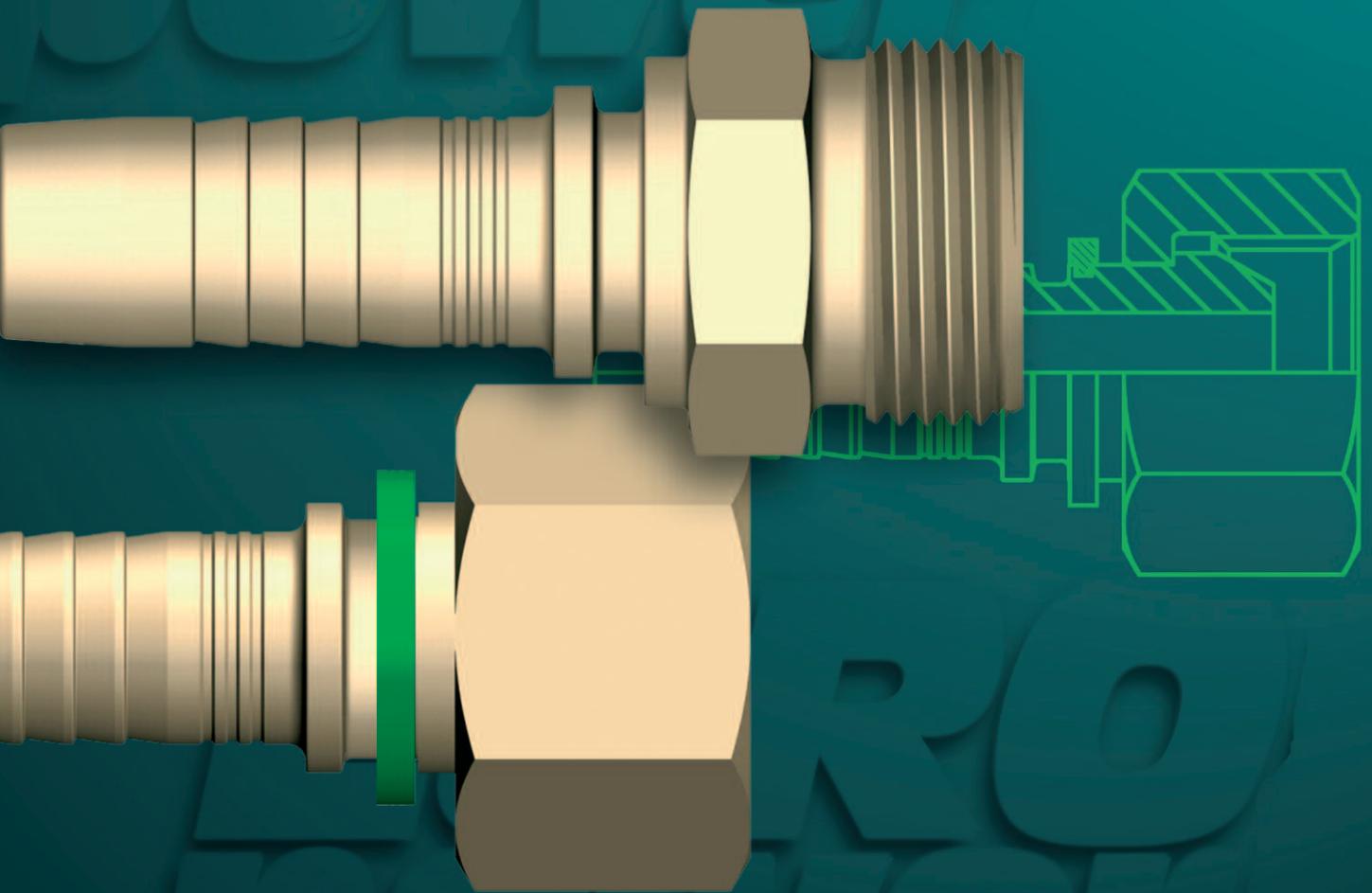


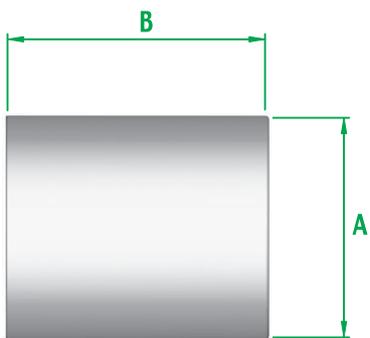
# CATALOGUE

## SWAGED FITTINGS



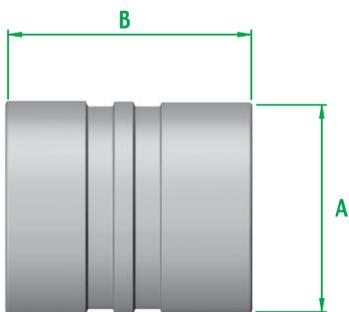
**EURO**  
*power*

SKIVED SWAGED FERRULE



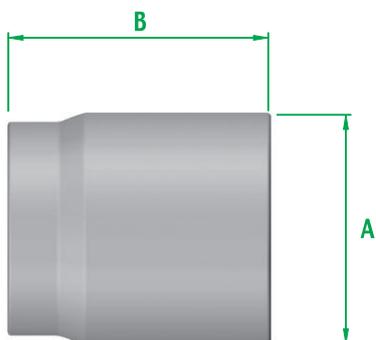
| NOMINAL HOSE BORE |       |      | PART NUMBER | Dim A | Dim B |
|-------------------|-------|------|-------------|-------|-------|
| mm                | in    | dash |             |       |       |
| 5                 | 3/16  | 03   | U1000-03    | 17.4  | 22.8  |
| 6                 | 1/4   | 04   | U1000-04    | 20.0  | 30.5  |
| 8                 | 5/16  | 05   | U1000-05    | 20.0  | 30.5  |
| 10                | 3/8   | 06   | U1000-06    | 23.0  | 32.0  |
| 12                | 1/2   | 08   | U1000-08    | 28.5  | 34.0  |
| 16                | 5/8   | 10   | U1000-10    | 31.7  | 36.8  |
| 19                | 3/4   | 12   | U1000-12    | 35.0  | 42.7  |
| 25                | 1     | 16   | U1000-16    | 42.8  | 50.8  |
| 31                | 1-1/4 | 20   | U1000-20    | 50.7  | 59.0  |
| 38                | 1-1/2 | 24   | U1000-24    | 57.1  | 63.3  |
| 51                | 2     | 32   | U1000-32    | 71.4  | 73.8  |

SKIVED SWAGED FERRULE



| NOMINAL HOSE BORE |       |      | PART NUMBER | Dim A | Dim B |
|-------------------|-------|------|-------------|-------|-------|
| mm                | in    | dash |             |       |       |
| 5                 | 3/16  | 03   | U2000-03    | 18.0  | 22.8  |
| 6                 | 1/4   | 04   | U2000-04    | 22.0  | 27.7  |
| 8                 | 5/16  | 05   | U2000-05    | 24.0  | 30.5  |
| 10                | 3/8   | 06   | U2000-06    | 26.0  | 31.7  |
| 12                | 1/2   | 08   | U2000-08    | 30.0  | 34.5  |
| 16                | 5/8   | 10   | U2000-10    | 34.0  | 36.5  |
| 19                | 3/4   | 12   | U2000-12    | 38.0  | 40.5  |
| 25                | 1     | 16   | U2000-16    | 46.0  | 53.0  |
| 31                | 1-1/4 | 20   | U2000-20    | 57.0  | 59.0  |
| 38                | 1-1/2 | 24   | U2000-24    | 64.6  | 64.0  |
| 51                | 2     | 32   | U2000-32    | 79.3  | 68.2  |

NON-SKIVED SWAGED FERRULE

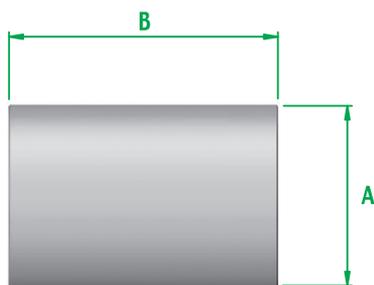


| NOMINAL HOSE BORE |       |      | PART NUMBER | Dim A | Dim B |
|-------------------|-------|------|-------------|-------|-------|
| mm                | in    | dash |             |       |       |
| 5                 | 3/16  | 03   | U5000-03    | 20.0  | 21.0  |
| 6                 | 1/4   | 04   | U5000-04    | 23.0  | 29.6  |
| 8                 | 5/16  | 05   | U5000-05    | 24.0  | 30.5  |
| 10                | 3/8   | 06   | U5000-06    | 26.0  | 31.2  |
| 12                | 1/2   | 08   | U5000-08    | 29.7  | 33.5  |
| 16                | 5/8   | 10   | U5000-10    | 33.0  | 36.0  |
| 19                | 3/4   | 12   | U5000-12    | 37.0  | 40.0  |
| 25                | 1     | 16   | U5000-16    | 47.0  | 50.0  |
| 31                | 1-1/4 | 20   | U5000-20    | 59.0  | 57.0  |
| 38                | 1-1/2 | 24   | U5000-24    | 67.0  | 66.0  |
| 51                | 2     | 32   | U5000-32    | 79.9  | 71.0  |



**SWAGED FERRULE**

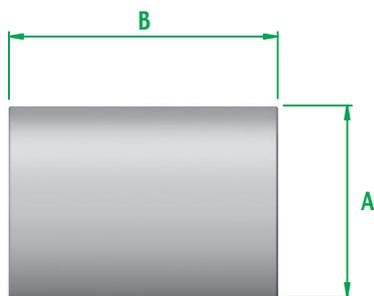
FOR USE ON THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |      |      | PART NUMBER | Dim A | Dim B |
|-------------------|------|------|-------------|-------|-------|
| mm                | in   | dash |             |       |       |
| 5                 | 3/16 | 03   | U7000-03    | 14.5  | 25.4  |
| 6                 | 1/4  | 04   | U7000-04    | 16.6  | 30.5  |
| 8                 | 5/16 | 05   | U7000-05    | 20.0  | 30.5  |
| 10                | 3/8  | 06   | U7000-06    | 21.0  | 32.0  |
| 12                | 1/2  | 08   | U7000-08    | 24.6  | 36.6  |
| 19                | 3/4  | 12   | U7000-12    | 30.1  | 44.5  |
| 25                | 1    | 16   | U7000-16    | 37.3  | 53.1  |

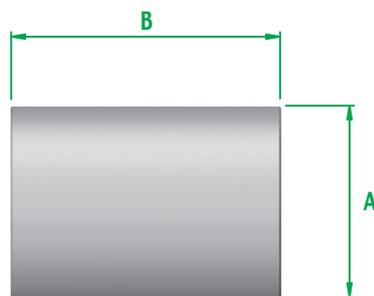
**SWAGED FERRULE**

FOR USE ON THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |      |      | PART NUMBER | Dim A | Dim B |
|-------------------|------|------|-------------|-------|-------|
| mm                | in   | dash |             |       |       |
| 5                 | 3/16 | 03   | U9000-03    | 16.0  | 23.6  |
| 6                 | 1/4  | 04   | U8000-04    | 20.6  | 30.2  |
| 8                 | 5/16 | 05   | U8000-05    | 20.4  | 30.2  |
| 10                | 3/8  | 06   | U8000-06    | 23.0  | 33.3  |
| 12                | 1/2  | 08   | U8000-08    | 26.2  | 36.5  |
| 12                | 1/2  | 08   | U9000-08    | 30.0  | 36.5  |
| 16                | 5/8  | 10   | U8000-10    | 29.4  | 38.9  |
| 19                | 3/4  | 12   | U8000-12    | 33.3  | 44.5  |
| 19                | 3/4  | 12   | U9000-12    | 35.0  | 42.7  |
| 25                | 1    | 16   | U9000-16    | 47.6  | 53.1  |

**SKIVED SWAGED FERRULE**

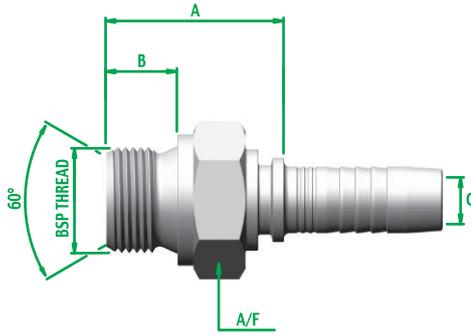


| NOMINAL HOSE BORE |       |      | PART NUMBER   | Dim A | Dim B |
|-------------------|-------|------|---------------|-------|-------|
| mm                | in    | dash |               |       |       |
| 6                 | 1/4   | 04   | CX04B-BDM-GZP | 20.6  | 30.5  |
| 10                | 3/8   | 06   | CX06B-BDM-GZP | 25.4  | 32.0  |
| 12                | 1/2   | 08   | CX08B-BDM-GZP | 30.2  | 34.0  |
| 19                | 3/4   | 12   | CX12B-BDM-GZP | 38.1  | 42.7  |
| 25                | 1     | 16   | CX16B-BDM-GZP | 46.0  | 50.8  |
| 31                | 1-1/4 | 20   | CX20B-GZP (*) | 50.8  | 59.0  |
| 38                | 1-1/2 | 24   | CX24B-BDM-GZP | 58.7  | 62.9  |
| 51                | 2     | 32   | CX32B-BDM-GZP | 74.6  | 74.2  |

(\*) FOR 20K13 RUBBER COVERED HOSE



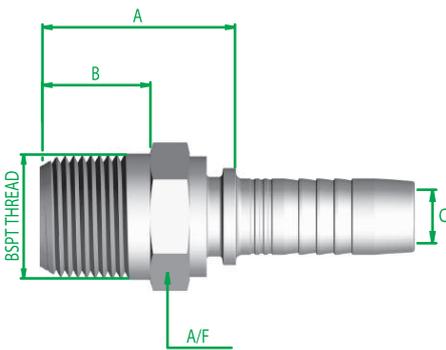
**B.S.P. MALE**



| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 1/8"          | 02       | 5                 | 3/16  | 03   | U02BM03     | 14  | 20.7  | 8.0   | 2.8   |
| 1/8"          | 02       | 6                 | 1/4   | 04   | U02BM04     | 14  | 21.2  | 8.0   | 4.0   |
| 1/4"          | 04       | 6                 | 1/4   | 04   | U04BM04     | 19  | 26.7  | 11.0  | 4.0   |
| 3/8"          | 06       | 6                 | 1/4   | 04   | U06BM04     | 22  | 29.2  | 12.0  | 4.0   |
| 3/8"          | 06       | 8                 | 5/16  | 05   | U06BM05     | 22  | 29.7  | 12.0  | 5.5   |
| 1/4"          | 04       | 10                | 3/8   | 06   | U04BM06     | 19  | 27.7  | 11.0  | 4.7   |
| 3/8"          | 06       | 10                | 3/8   | 06   | U06BM06     | 22  | 30.2  | 12.0  | 7.0   |
| 1/2"          | 08       | 10                | 3/8   | 06   | U08BM06     | 27  | 34.7  | 14.0  | 7.0   |
| 3/8"          | 06       | 12                | 1/2   | 08   | U06BM08     | 22  | 30.5  | 12.0  | 7.9   |
| 1/2"          | 08       | 12                | 1/2   | 08   | U08BM08     | 27  | 35.0  | 14.0  | 9.3   |
| 3/4"          | 12       | 12                | 1/2   | 08   | U12BM08     | 32  | 39.0  | 16.0  | 9.3   |
| 1/2"          | 08       | 16                | 5/8   | 10   | U08BM10     | 27  | 35.1  | 14.0  | 11.1  |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BM10     | 30  | 39.1  | 16.0  | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BM12     | 32  | 40.0  | 16.0  | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BM16     | 41  | 47.0  | 19.0  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BM20     | 50  | 52.4  | 20.0  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BM24     | 55  | 59.0  | 22.0  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. MALE TAPERED**

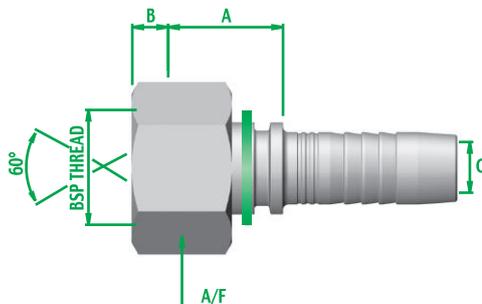


| B.S.P.T. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in    | dash |             |     |       |       |       |
| 1/8"            | 02       | 5                 | 3/16  | 03   | U02BMT03    | 12  | 20.1  | 10.0  | 2.8   |
| 1/8"            | 02       | 6                 | 1/4   | 04   | U02BMT04    | 13  | 20.1  | 10.0  | 4.0   |
| 1/4"            | 04       | 6                 | 1/4   | 04   | U04BMT04    | 14  | 24.1  | 13.0  | 4.0   |
| 3/8"            | 06       | 6                 | 1/4   | 04   | U06BMT04    | 19  | 27.7  | 15.0  | 4.0   |
| 1/4"            | 04       | 8                 | 5/16  | 05   | U04BMT05    | 17  | 25.9  | 13.0  | 5.5   |
| 3/8"            | 06       | 8                 | 5/16  | 05   | U06BMT05    | 19  | 28.2  | 15.0  | 5.5   |
| 1/4"            | 04       | 10                | 3/8   | 06   | U04BMT06    | 17  | 26.4  | 13.0  | 7.0   |
| 3/8"            | 06       | 10                | 3/8   | 06   | U06BMT06    | 19  | 28.7  | 15.0  | 7.0   |
| 1/2"            | 08       | 10                | 3/8   | 06   | U08BMT06    | 22  | 32.2  | 18.0  | 7.0   |
| 1/2"            | 08       | 12                | 1/2   | 08   | U08BMT08    | 22  | 32.5  | 18.0  | 9.3   |
| 3/4"            | 12       | 19                | 3/4   | 12   | U12BMT12    | 30  | 38.3  | 20.0  | 15.0  |
| 1"              | 16       | 25                | 1     | 16   | U16BMT16    | 36  | 43.0  | 22.0  | 19.5  |
| 1-1/4"          | 20       | 31                | 1-1/4 | 20   | U20BMT20    | 46  | 52.3  | 25.0  | 26.0  |
| 1-1/2"          | 24       | 38                | 1-1/2 | 24   | U24BMT24    | 50  | 53.4  | 25.0  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE**

**LOOSE NUT**



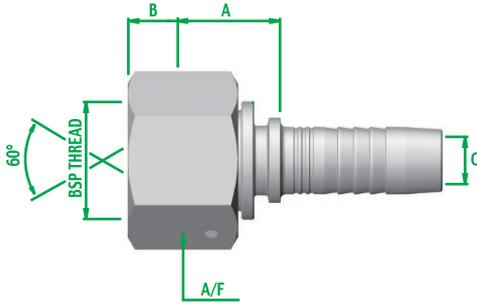
| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in   | dash |             |     |       |       |       |
| 1/4"          | 04       | 5                 | 3/16 | 03   | U04BF03     | 19  | 16.0  | 5.2   | 2.8   |
| 1/4"          | 04       | 6                 | 1/4  | 04   | U04BF04     | 19  | 16.5  | 5.2   | 4.0   |
| 3/8"          | 06       | 6                 | 1/4  | 04   | U06BF04     | 22  | 19.1  | 6.0   | 4.0   |
| 3/8"          | 06       | 8                 | 5/16 | 05   | U06BF05     | 22  | 19.1  | 6.0   | 5.5   |
| 3/8"          | 06       | 10                | 3/8  | 06   | U06BF06     | 22  | 19.6  | 6.0   | 7.0   |
| 1/2"          | 08       | 10                | 3/8  | 06   | U08BF06     | 27  | 23.0  | 6.5   | 7.0   |
| 1/2"          | 08       | 12                | 1/2  | 08   | U08BF08     | 27  | 20.8  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length



## B.S.P. FEMALE

## WIRED ON NUT

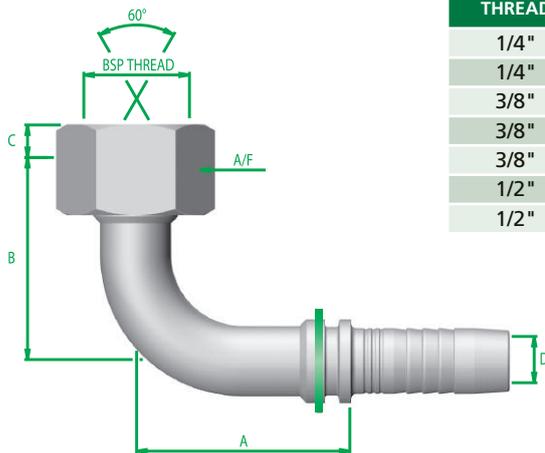


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 1/8"          | 02       | 5                 | 3/16  | 03   | U02BF03     | 14  | 15.0  | 4.3   | 2.8   |
| 1/8"          | 02       | 6                 | 1/4   | 04   | U02BF04     | 14  | 15.5  | 4.3   | 2.8   |
| 1/4"          | 04       | 8                 | 5/16  | 05   | U04BF05     | 19  | 18.0  | 5.2   | 4.5   |
| 1/4"          | 04       | 10                | 3/8   | 06   | U04BF06     | 19  | 18.7  | 5.2   | 4.0   |
| 3/8"          | 06       | 12                | 1/2   | 08   | U06BF08     | 22  | 20.2  | 6.0   | 7.0   |
| 5/8"          | 10       | 12                | 1/2   | 08   | U10BF08     | 30  | 20.0  | 9.7   | 9.3   |
| 3/4"          | 12       | 12                | 1/2   | 08   | U12BF08     | 32  | 25.7  | 9.0   | 9.3   |
| 1/2"          | 08       | 16                | 5/8   | 10   | U08BF10     | 27  | 22.8  | 6.5   | 9.7   |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BF10     | 30  | 20.1  | 9.7   | 12.0  |
| 3/4"          | 12       | 16                | 5/8   | 10   | U12BF10     | 32  | 23.3  | 9.0   | 12.0  |
| 1/2"          | 08       | 19                | 3/4   | 12   | U08BF12     | 27  | 23.7  | 6.5   | 9.7   |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BF12     | 32  | 24.2  | 9.0   | 15.0  |
| 1"            | 16       | 19                | 3/4   | 12   | U16BF12     | 41  | 25.7  | 10.5  | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BF16     | 41  | 27.7  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BF20     | 50  | 30.9  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BF24     | 55  | 29.7  | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BF32     | 70  | 31.4  | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

## B.S.P. FEMALE 90° SWEPT ELBOW

## LOOSE NUT

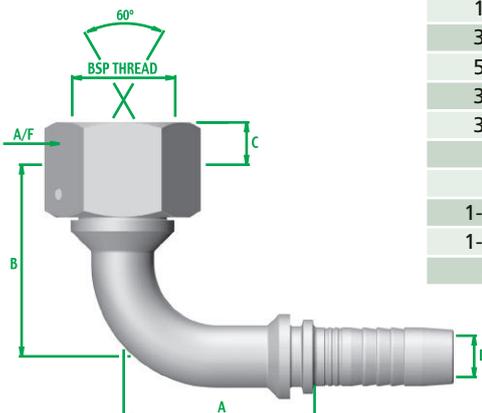


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in   | dash |             |     |       |       |       |       |
| 1/4"          | 04       | 5                 | 3/16 | 03   | U04BF90S03  | 19  | 24.3  | 27.1  | 5.2   | 2.8   |
| 1/4"          | 04       | 6                 | 1/4  | 04   | U04BF90S04  | 19  | 27.2  | 28.8  | 5.2   | 4.0   |
| 3/8"          | 06       | 6                 | 1/4  | 04   | U06BF90S04  | 22  | 27.2  | 32.0  | 6.0   | 4.0   |
| 3/8"          | 06       | 8                 | 5/16 | 05   | U06BF90S05  | 22  | 28.7  | 34.1  | 6.0   | 5.5   |
| 3/8"          | 06       | 10                | 3/8  | 06   | U06BF90S06  | 22  | 31.5  | 34.1  | 6.0   | 7.0   |
| 1/2"          | 08       | 10                | 3/8  | 06   | U08BF90S06  | 27  | 31.5  | 36.5  | 6.5   | 7.0   |
| 1/2"          | 08       | 12                | 1/2  | 08   | U08BF90S08  | 27  | 42.3  | 40.4  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

## B.S.P. FEMALE 90° SWEPT ELBOW

## WIRED ON NUT

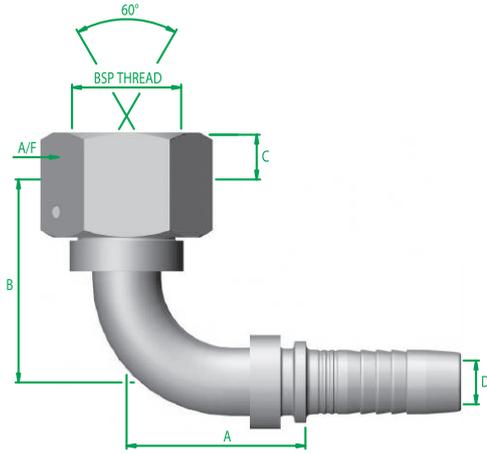


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 1/8"          | 02       | 5                 | 3/16  | 03   | U02BF90S03  | 14  | 23.4  | 29.4  | 4.3   | 2.8   |
| 1/8"          | 02       | 6                 | 1/4   | 04   | U02BF90S04  | 14  | 27.2  | 31.1  | 4.3   | 2.8   |
| 1/4"          | 04       | 10                | 3/8   | 06   | U04BF90S06  | 19  | 31.5  | 37.3  | 5.2   | 4.5   |
| 3/8"          | 06       | 12                | 1/2   | 08   | U06BF90S08  | 22  | 42.3  | 43.6  | 6.0   | 7.0   |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BF90S10  | 30  | 47.6  | 52.2  | 9.7   | 12.0  |
| 3/4"          | 12       | 16                | 5/8   | 10   | U12BF90S10  | 32  | 47.6  | 52.7  | 9.0   | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BF90S12  | 32  | 53.8  | 62.9  | 9.0   | 15.0  |
| 1"            | 16       | 19                | 3/4   | 12   | U16BF90S12  | 41  | 53.8  | 63.3  | 10.5  | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BF90S16  | 41  | 63.8  | 78.7  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BF90S20  | 50  | 81.0  | 93.0  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BF90S24  | 55  | 106.4 | 100.7 | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BF90S32  | 70  | 137.5 | 137.3 | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE 90° SWEPT ELBOW**

**SHORT DROP**

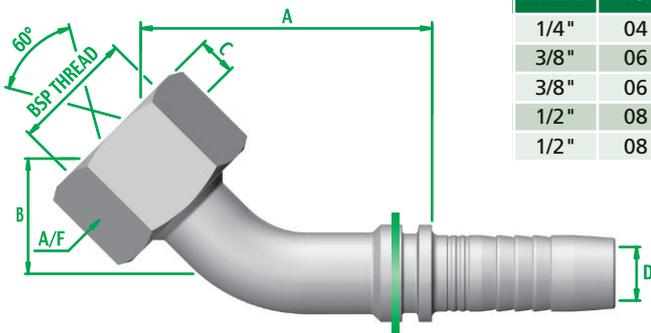


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BF90SS20 | 50  | 67.5  | 74.3  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BF90SS24 | 55  | 77.1  | 82.8  | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BF90SS32 | 70  | 100.4 | 102.8 | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE 45° SWEPT ELBOW**

**LOOSE NUT**

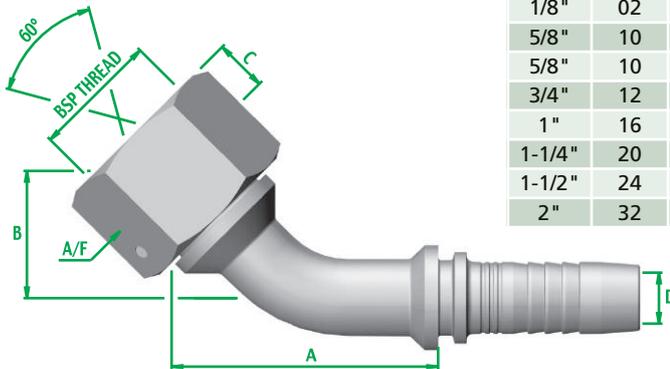


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in   | dash |             |     |       |       |       |       |
| 1/4"          | 04       | 6                 | 1/4  | 04   | U04BF45S04  | 19  | 36.3  | 14.6  | 5.2   | 4.0   |
| 3/8"          | 06       | 8                 | 5/16 | 05   | U06BF45S05  | 22  | 37.8  | 17.9  | 6.0   | 5.5   |
| 3/8"          | 06       | 10                | 3/8  | 06   | U06BF45S06  | 22  | 39.1  | 17.3  | 6.0   | 7.0   |
| 1/2"          | 08       | 10                | 3/8  | 06   | U08BF45S06  | 27  | 40.6  | 19.0  | 6.5   | 7.0   |
| 1/2"          | 08       | 12                | 1/2  | 08   | U08BF45S08  | 27  | 49.9  | 19.9  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE 45° SWEPT ELBOW**

**WIRED ON NUT**

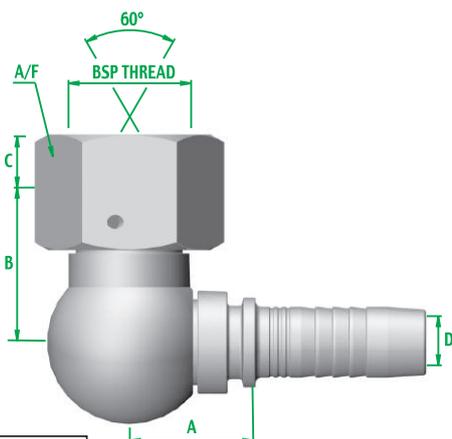


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 1/8"          | 02       | 5                 | 3/16  | 03   | U02BF45S03  | 14  | 33.7  | 16.5  | 4.3   | 2.8   |
| 5/8"          | 10       | 12                | 1/2   | 08   | U10BF45S08  | 30  | 51.3  | 21.3  | 9.7   | 9.3   |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BF45S10  | 30  | 57.5  | 25.7  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BF45S12  | 32  | 66.8  | 31.6  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BF45S16  | 41  | 80.4  | 39.4  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BF45S20  | 50  | 99.1  | 46.2  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BF45S24  | 55  | 117.5 | 46.3  | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BF45S32  | 70  | 158.1 | 65.4  | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE 90° COMPACT**

**WIRED ON NUT**



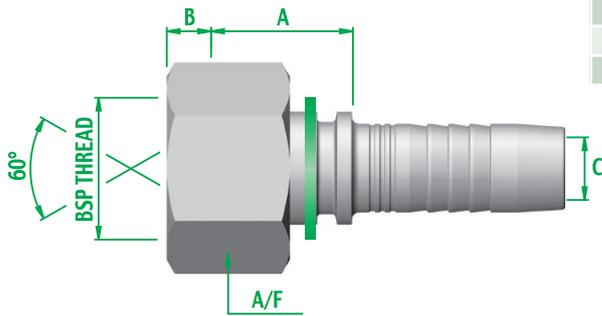
| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in   | dash |             |     |       |       |       |       |
| 1/8"          | 02       | 5                 | 3/16 | 03   | U02BF90K03  | 14  | 16.8  | 18.4  | 4.3   | 2.8   |
| 1/4"          | 04       | 6                 | 1/4  | 04   | U04BF90K04  | 19  | 17.3  | 21.3  | 5.2   | 4.0   |
| 3/8"          | 06       | 6                 | 1/4  | 04   | U06BF90K04  | 22  | 18.5  | 23.5  | 6.0   | 4.0   |
| 3/8"          | 06       | 8                 | 5/16 | 05   | U06BF90K05  | 22  | 18.5  | 23.5  | 6.0   | 5.5   |
| 3/8"          | 06       | 10                | 3/8  | 06   | U06BF90K06  | 22  | 18.9  | 23.5  | 6.0   | 7.0   |
| 1/2"          | 08       | 10                | 3/8  | 06   | U08BF90K06  | 27  | 21.1  | 29.0  | 6.5   | 7.0   |
| 1/2"          | 08       | 12                | 1/2  | 08   | U08BF90K08  | 27  | 21.4  | 29.0  | 6.5   | 9.3   |
| 5/8"          | 10       | 16                | 5/8  | 10   | U10BF90K10  | 30  | 27.0  | 29.2  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4  | 12   | U12BF90K12  | 32  | 27.4  | 31.7  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1    | 16   | U16BF90K16  | 41  | 33.6  | 38.1  | 10.5  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length



**B.S.P. 'O' RING SEALING FEMALE**

**LOOSE NUT**

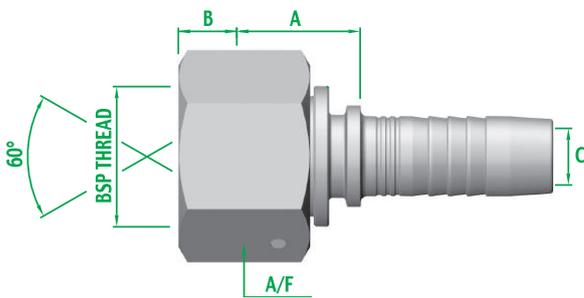


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BOF04    | 19  | 16.5  | 5.2   | 4.0   |
| 3/8"          | 06       | 6                 | 1/4 | 04   | U06BOF04    | 22  | 19.1  | 6.0   | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BOF06    | 22  | 19.6  | 6.0   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BOF08    | 27  | 20.8  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE**

**WIRED ON NUT**

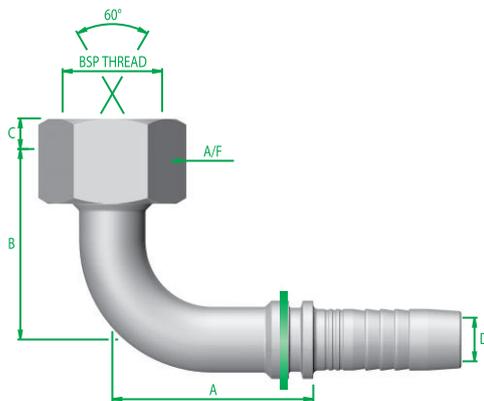


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 3/8"          | 06       | 12                | 1/2   | 08   | U06BOF08    | 22  | 20.2  | 6.0   | 7.0   |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BOF10    | 30  | 20.1  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BOF12    | 32  | 24.2  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BOF16    | 41  | 27.7  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BOF20    | 50  | 30.9  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BOF24    | 55  | 29.7  | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BOF32    | 70  | 31.4  | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 90° SWEEP ELBOW**

**LOOSE NUT**

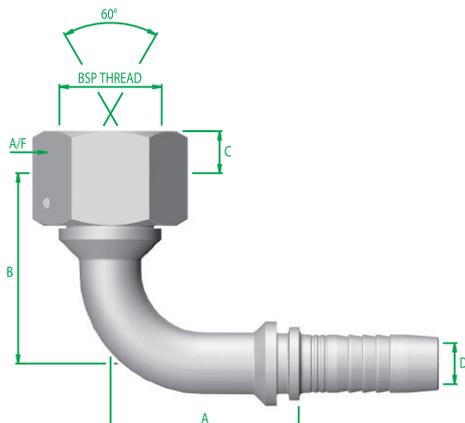


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BOF90S04 | 19  | 27.2  | 28.8  | 5.2   | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BOF90S06 | 22  | 31.5  | 34.1  | 6.0   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BOF90S08 | 27  | 42.3  | 40.4  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 90° SWEEP ELBOW**

**WIRED ON NUT**

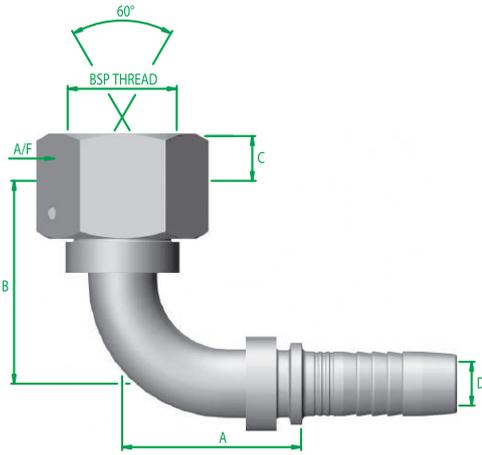


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BOF90S10 | 30  | 47.6  | 52.2  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BOF90S12 | 32  | 53.8  | 62.9  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BOF90S16 | 41  | 63.8  | 78.7  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BOF90S20 | 50  | 81.0  | 93.0  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BOF90S24 | 55  | 106.4 | 100.7 | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BOF90S32 | 70  | 137.5 | 137.3 | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 90° SWEPT ELBOW**

SHORT DROP

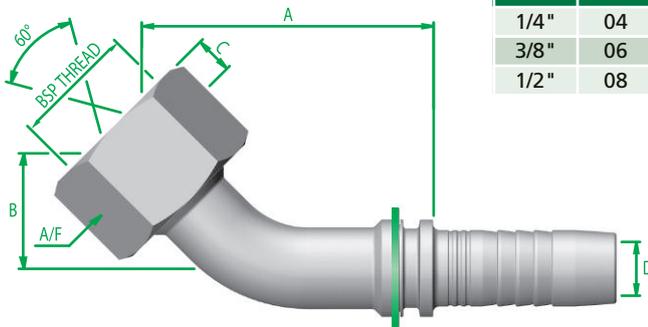


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|--------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |              |     |       |       |       |       |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BOF90SS08 | 27  | 33.3  | 38.1  | 6.5   | 9.3   |
| 5/8"          | 10       | 16                | 5/8 | 10   | U10BOF90SS10 | 30  | 39.7  | 42.2  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4 | 12   | U12BOF90SS12 | 32  | 45.6  | 50.2  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1   | 16   | U16BOF90SS16 | 41  | 57.1  | 61.7  | 10.5  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 45° SWEPT ELBOW**

LOOSE NUT

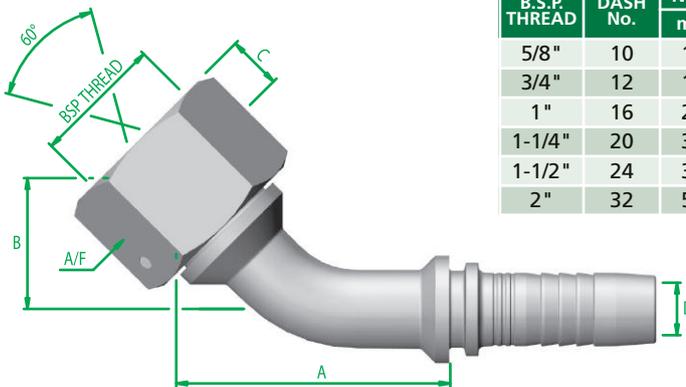


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BOF45S04 | 19  | 36.3  | 14.6  | 5.2   | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BOF45S06 | 22  | 39.1  | 17.3  | 6.0   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BOF45S08 | 27  | 49.9  | 19.9  | 6.5   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 45° SWEPT ELBOW**

WIRED ON NUT

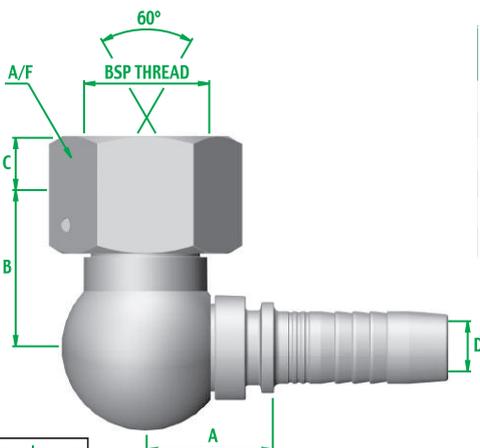


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 5/8"          | 10       | 16                | 5/8   | 10   | U10BOF45S10 | 30  | 57.5  | 25.7  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4   | 12   | U12BOF45S12 | 32  | 66.8  | 31.6  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1     | 16   | U16BOF45S16 | 41  | 80.4  | 39.4  | 10.5  | 19.5  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | U20BOF45S20 | 50  | 99.1  | 46.2  | 10.1  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | U24BOF45S24 | 55  | 117.5 | 46.3  | 12.5  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | U32BOF45S32 | 70  | 158.1 | 65.4  | 16.1  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. 'O' RING SEALING FEMALE 90° COMPACT**

WIRED ON NUT



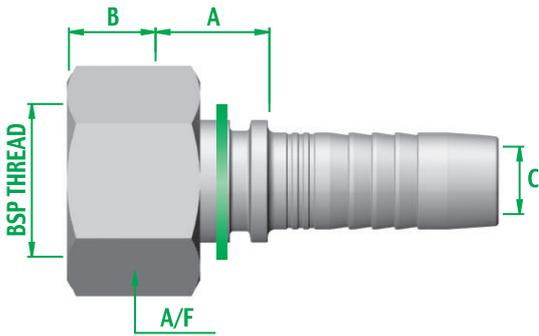
| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BOF90K04 | 19  | 17.3  | 21.3  | 5.2   | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BOF90K06 | 22  | 18.9  | 23.5  | 6.0   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BOF90K08 | 27  | 21.4  | 29.0  | 6.5   | 9.3   |
| 5/8"          | 10       | 16                | 5/8 | 10   | U10BOF90K10 | 30  | 27.0  | 29.2  | 9.7   | 12.0  |
| 3/4"          | 12       | 19                | 3/4 | 12   | U12BOF90K12 | 32  | 27.4  | 31.7  | 9.0   | 15.0  |
| 1"            | 16       | 25                | 1   | 16   | U16BOF90K16 | 41  | 33.6  | 38.1  | 10.5  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length



**B.S.P. FLAT FACE FEMALE**

**LOOSE NUT**

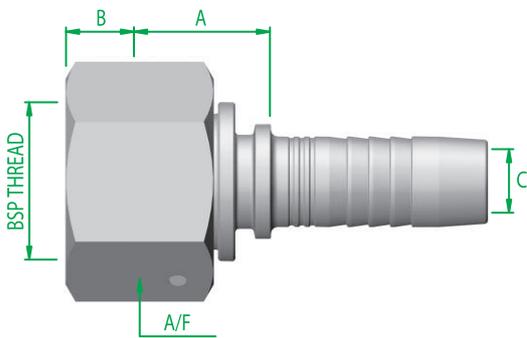


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BFF04    | 19  | 12.8  | 8.9   | 4.0   |
| 3/8"          | 06       | 6                 | 1/4 | 04   | U06BFF04    | 22  | 14.4  | 10.7  | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BFF06    | 22  | 14.9  | 10.7  | 7.0   |
| 1/2"          | 08       | 10                | 3/8 | 06   | U08BFF06    | 27  | 17.7  | 11.8  | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BFF08    | 27  | 15.5  | 11.8  | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FLAT FACE FEMALE**

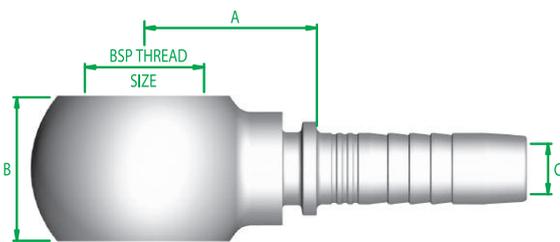
**WIRED ON NUT**



| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 3/4"          | 12       | 12                | 1/2 | 08   | U12BFF08    | 32  | 20.7  | 11.5  | 9.3   |
| 3/4"          | 12       | 19                | 3/4 | 12   | U12BFF12    | 32  | 21.7  | 11.5  | 15.0  |

NOTE: Dim A represents Hose Cut Off Length

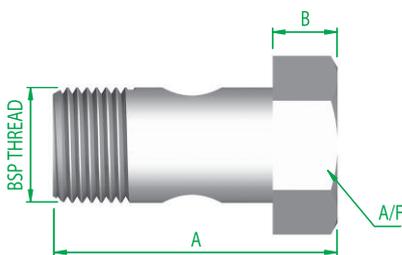
**B.S.P. BANJO**



| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-------|-------|-------|
|               |          | mm                | in  | dash |             |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BG04     | 22.6  | 15.2  | 4.0   |
| 3/8"          | 06       | 6                 | 1/4 | 04   | U06BG04     | 24.2  | 20.3  | 4.0   |
| 1/4"          | 04       | 10                | 3/8 | 06   | U04BG06     | 23.1  | 15.2  | 7.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BG06     | 23.9  | 20.3  | 7.0   |
| 1/2"          | 08       | 10                | 3/8 | 06   | U08BG06     | 29.5  | 25.4  | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BG08     | 29.7  | 25.4  | 9.3   |
| 3/4"          | 12       | 19                | 3/4 | 12   | U12BG12     | 36.3  | 30.0  | 15.0  |

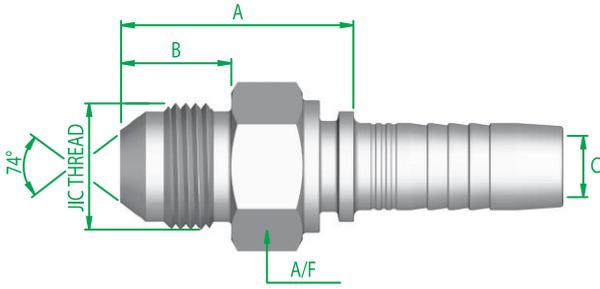
NOTE: Dim A represents Hose Cut Off Length

**B.S.P. BANJO BOLT**



| B.S.P. THREAD | DASH No. | PART NUMBER | A/F | Dim A | Dim B |
|---------------|----------|-------------|-----|-------|-------|
| 1/4"          | 04       | RX04BMG     | 19  | 35.1  | 6.1   |
| 3/8"          | 06       | RX06BMG     | 22  | 42.9  | 6.9   |
| 1/2"          | 08       | RX08BMG     | 27  | 53.1  | 8.6   |
| 3/4"          | 12       | RX12BMG     | 32  | 62.0  | 10.2  |

J.I.C. MALE

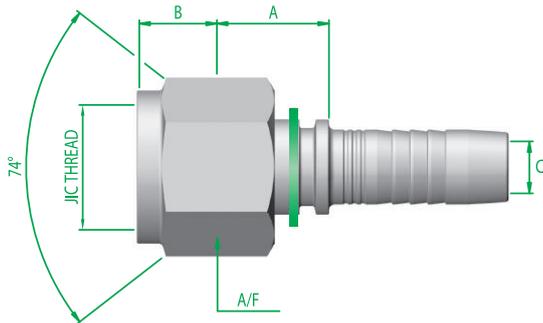


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 7/16" x 20    | 07       | 6                 | 1/4   | 04   | U07JM04     | 13  | 28.2  | 14.0  | 4.0   |
| 1/2" x 20     | 08       | 6                 | 1/4   | 04   | U08JM04     | 13  | 29.2  | 14.0  | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4   | 04   | U09JM04     | 16  | 29.2  | 14.0  | 4.0   |
| 9/16" x 18    | 09       | 8                 | 5/16  | 05   | U09JM05     | 16  | 29.2  | 14.0  | 5.5   |
| 3/4" x 16     | 12       | 8                 | 5/16  | 05   | U12JM05     | 19  | 34.0  | 16.5  | 5.5   |
| 1/2" x 20     | 08       | 10                | 3/8   | 06   | U08JM06     | 17  | 29.7  | 14.0  | 5.5   |
| 9/16" x 18    | 09       | 10                | 3/8   | 06   | U09JM06     | 16  | 29.7  | 14.0  | 7.0   |
| 3/4" x 16     | 12       | 10                | 3/8   | 06   | U12JM06     | 19  | 34.5  | 16.5  | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2   | 08   | U12JM08     | 22  | 34.8  | 16.5  | 9.3   |
| 7/8" x 14     | 14       | 12                | 1/2   | 08   | U14JM08     | 24  | 39.3  | 19.5  | 9.3   |
| 7/8" x 14     | 14       | 16                | 5/8   | 10   | U14JM10     | 24  | 39.4  | 19.5  | 12.0  |
| 1-1/16" x 12  | 17       | 16                | 5/8   | 10   | U17JM10     | 27  | 43.2  | 22.0  | 12.0  |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | U17JM12     | 27  | 44.1  | 22.0  | 15.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | U21JM12     | 36  | 47.1  | 23.0  | 15.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | U21JM16     | 36  | 48.1  | 23.0  | 19.5  |
| 1-5/8" x 12   | 26       | 25                | 1     | 16   | U26JM16     | 46  | 53.3  | 24.3  | 19.5  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | U26JM20     | 46  | 53.5  | 24.3  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | U30JM24     | 50  | 60.5  | 27.5  | 32.0  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | U40JM32     | 65  | 72.1  | 34.0  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE

LOOSE NUT

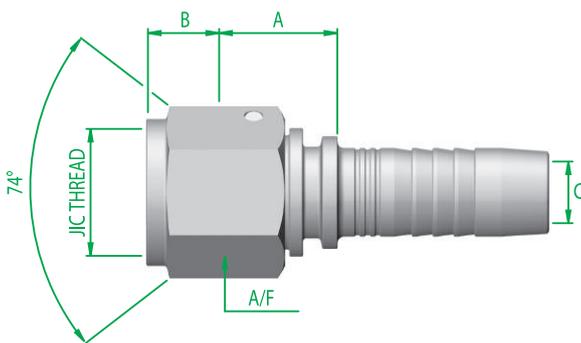


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in   | dash |             |     |       |       |       |
| 1/2" x 20     | 08       | 5                 | 3/16 | 03   | U08JF03     | 17  | 14.5  | 9.5   | 2.8   |
| 1/2" x 20     | 08       | 6                 | 1/4  | 04   | U08JF04     | 17  | 15.0  | 9.5   | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4  | 04   | U09JF04     | 19  | 16.0  | 8.5   | 4.0   |
| 3/4" x 16     | 12       | 8                 | 5/16 | 05   | U12JF05     | 22  | 17.6  | 10.7  | 5.5   |
| 3/4" x 16     | 12       | 10                | 3/8  | 06   | U12JF06     | 22  | 18.1  | 10.7  | 7.0   |
| 7/8" x 14     | 14       | 10                | 3/8  | 06   | U14JF06     | 27  | 22.0  | 13.7  | 7.0   |
| 7/8" x 14     | 14       | 12                | 1/2  | 08   | U14JF08     | 27  | 19.8  | 13.7  | 9.3   |
| 1-1/16" x 12  | 17       | 12                | 1/2  | 08   | U17JF08     | 32  | 24.2  | 15.0  | 9.3   |
| 1-1/16" x 12  | 17       | 16                | 5/8  | 10   | U17JF10     | 32  | 21.8  | 15.0  | 12.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE

WIRED ON NUT



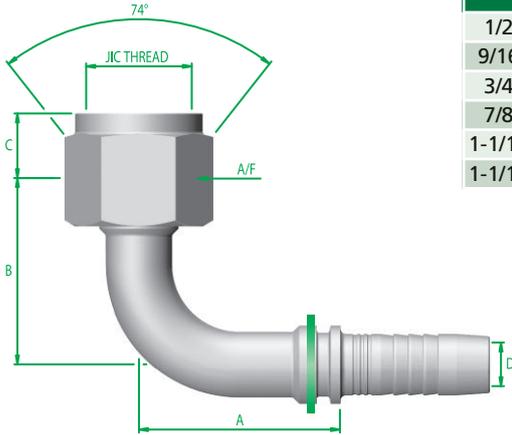
| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 7/16" x 20    | 07       | 5                 | 3/16  | 03   | U07JF03     | 14  | 15.0  | 8.4   | 2.8   |
| 7/16" x 20    | 07       | 6                 | 1/4   | 04   | U07JF04     | 14  | 15.5  | 8.4   | 4.0   |
| 1/2" x 20     | 08       | 8                 | 5/16  | 05   | U08JF05     | 17  | 16.0  | 9.5   | 5.5   |
| 9/16" x 18    | 09       | 8                 | 5/16  | 05   | U09JF05     | 19  | 15.7  | 8.9   | 5.5   |
| 1/2" x 20     | 08       | 10                | 3/8   | 06   | U08JF06     | 17  | 16.5  | 9.5   | 4.0   |
| 9/16" x 18    | 09       | 10                | 3/8   | 06   | U09JF06     | 19  | 16.2  | 8.9   | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2   | 08   | U12JF08     | 22  | 17.6  | 10.8  | 9.3   |
| 3/4" x 16     | 12       | 16                | 5/8   | 10   | U12JF10     | 22  | 18.2  | 10.8  | 9.3   |
| 7/8" x 14     | 14       | 16                | 5/8   | 10   | U14JF10     | 27  | 19.7  | 13.7  | 12.0  |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | U17JF12     | 32  | 21.8  | 15.1  | 15.0  |
| 1-3/16" x 12  | 19       | 19                | 3/4   | 12   | U19JF12     | 36  | 22.3  | 14.7  | 15.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | U21JF12     | 41  | 22.1  | 16.8  | 15.0  |
| 1-1/16" x 12  | 17       | 25                | 1     | 16   | U17JF16     | 32  | 23.8  | 15.1  | 15.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | U21JF16     | 41  | 24.1  | 16.8  | 19.5  |
| 1-5/8" x 12   | 26       | 25                | 1     | 16   | U26JF16     | 50  | 27.1  | 16.1  | 19.5  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | U26JF20     | 50  | 28.5  | 16.1  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | U30JF24     | 60  | 30.8  | 19.4  | 32.0  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | U40JF32     | 75  | 33.4  | 24.0  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length



**J.I.C. FEMALE 90° SWEPT ELBOW**

**LOOSE NUT**

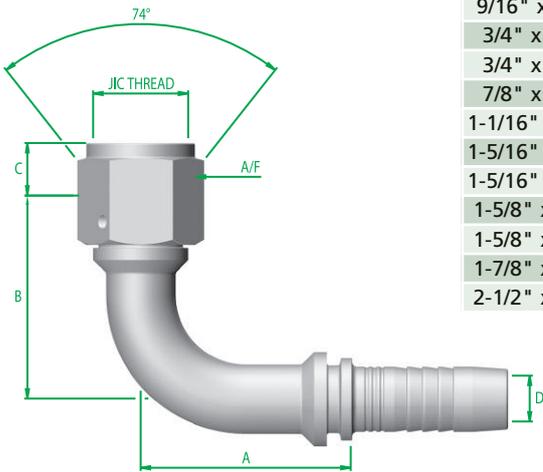


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 1/2" x 20     | 08       | 6                 | 1/4 | 04   | U08JF90S04  | 17  | 27.2  | 27.2  | 9.5   | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4 | 04   | U09JF90S04  | 19  | 27.2  | 28.2  | 8.5   | 4.0   |
| 3/4" x 16     | 12       | 10                | 3/8 | 06   | U12JF90S06  | 22  | 31.5  | 32.3  | 10.8  | 7.0   |
| 7/8" x 14     | 14       | 12                | 1/2 | 08   | U14JF90S08  | 27  | 42.3  | 39.2  | 13.7  | 9.3   |
| 1-1/16" x 12  | 17       | 12                | 1/2 | 08   | U17JF90S08  | 32  | 42.3  | 42.6  | 15.0  | 9.3   |
| 1-1/16" x 12  | 17       | 16                | 5/8 | 10   | U17JF90S10  | 32  | 47.6  | 51.8  | 15.0  | 12.0  |

NOTE: Dim A represents Hose Cut Off Length

**J.I.C. FEMALE 90° SWEPT ELBOW**

**WIRED ON NUT**

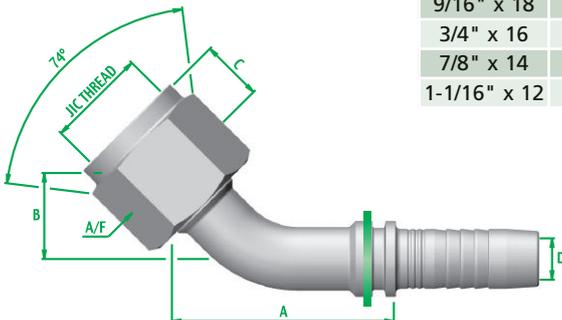


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 7/16" x 20    | 07       | 5                 | 3/16  | 03   | U07JF90S03  | 14  | 24.3  | 31.5  | 8.4   | 2.8   |
| 7/16" x 20    | 07       | 6                 | 1/4   | 04   | U07JF90S04  | 14  | 27.2  | 32.4  | 8.4   | 4.0   |
| 1/2" x 20     | 08       | 8                 | 5/16  | 05   | U08JF90S05  | 17  | 28.7  | 33.0  | 9.5   | 5.5   |
| 9/16" x 18    | 09       | 8                 | 5/16  | 05   | U09JF90S05  | 19  | 28.7  | 35.3  | 8.9   | 5.5   |
| 9/16" x 18    | 09       | 10                | 3/8   | 06   | U09JF90S06  | 19  | 31.5  | 35.3  | 8.9   | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2   | 08   | U12JF90S08  | 22  | 42.3  | 41.0  | 10.8  | 9.3   |
| 3/4" x 16     | 12       | 16                | 5/8   | 10   | U12JF90S10  | 22  | 47.6  | 50.3  | 10.8  | 9.3   |
| 7/8" x 14     | 14       | 16                | 5/8   | 10   | U14JF90S10  | 27  | 47.6  | 51.8  | 13.7  | 12.0  |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | U17JF90S12  | 32  | 53.8  | 61.0  | 15.1  | 15.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | U21JF90S12  | 41  | 53.8  | 60.1  | 16.8  | 15.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | U21JF90S16  | 41  | 63.8  | 75.1  | 16.8  | 19.5  |
| 1-5/8" x 12   | 26       | 25                | 1     | 16   | U26JF90S16  | 50  | 63.8  | 78.0  | 16.1  | 19.5  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | U26JF90S20  | 50  | 81.0  | 91.1  | 16.1  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | U30JF90S24  | 60  | 106.4 | 101.9 | 19.4  | 32.0  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | U40JF90S32  | 75  | 137.5 | 142.2 | 24.0  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**J.I.C. FEMALE 45° SWEPT ELBOW**

**LOOSE NUT**



| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 1/2" x 20     | 08       | 6                 | 1/4 | 04   | U08JF45S04  | 17  | 32.4  | 13.4  | 9.5   | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4 | 04   | U09JF45S04  | 19  | 33.1  | 14.1  | 8.5   | 4.0   |
| 3/4" x 16     | 12       | 10                | 3/8 | 06   | U12JF45S06  | 22  | 37.8  | 16.0  | 10.8  | 7.0   |
| 7/8" x 14     | 14       | 12                | 1/2 | 08   | U14JF45S08  | 27  | 49.2  | 19.2  | 13.7  | 9.3   |
| 1-1/16" x 12  | 17       | 16                | 5/8 | 10   | U17JF45S10  | 32  | 57.2  | 25.4  | 15.0  | 12.0  |

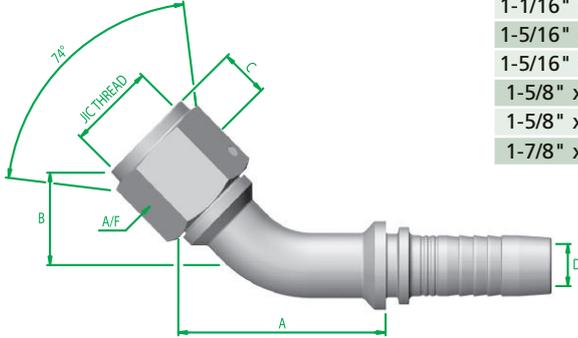
NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE 45° SWEEP ELBOW

WIRED ON NUT

| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |       |
| 7/16" x 20    | 07       | 6                 | 1/4   | 04   | U07JF45S04  | 14  | 36.1  | 17.1  | 8.4   | 4.0   |
| 9/16" x 18    | 09       | 8                 | 5/16  | 05   | U09JF45S05  | 19  | 38.7  | 18.8  | 8.9   | 5.5   |
| 9/16" x 18    | 09       | 10                | 3/8   | 06   | U09JF45S06  | 19  | 40.0  | 18.1  | 8.9   | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2   | 08   | U12JF45S08  | 22  | 50.3  | 20.3  | 10.8  | 9.3   |
| 3/4" x 16     | 12       | 16                | 5/8   | 10   | U12JF45S10  | 22  | 56.2  | 24.4  | 10.8  | 9.3   |
| 7/8" x 14     | 14       | 16                | 5/8   | 10   | U14JF45S10  | 27  | 57.2  | 25.4  | 13.7  | 12.0  |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | U17JF45S12  | 32  | 65.1  | 30.0  | 15.1  | 15.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | U21JF45S12  | 41  | 64.5  | 29.3  | 16.8  | 15.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | U21JF45S16  | 41  | 77.9  | 37.0  | 16.8  | 19.5  |
| 1-5/8" x 12   | 26       | 25                | 1     | 16   | U26JF45S16  | 50  | 79.9  | 39.0  | 22    | 22    |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | U26JF45S20  | 50  | 97.4  | 44.5  | 16.1  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | U30JF45S24  | 60  | 118.4 | 47.2  | 19.4  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

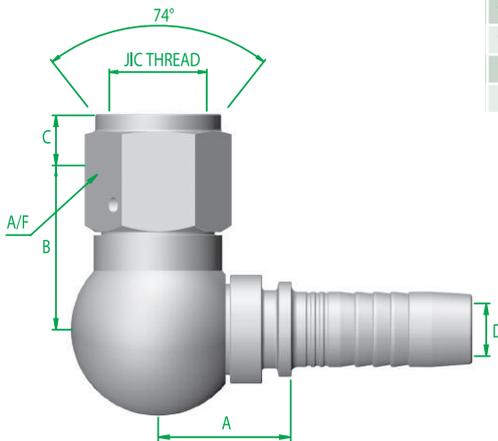


J.I.C. FEMALE 90° COMPACT

WIRED ON NUT

| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 7/16" x 20    | 07       | 6                 | 1/4 | 04   | U07JF90K04  | 14  | 17.3  | 18.8  | 8.4   | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4 | 04   | U09JF90K04  | 19  | 17.3  | 21.6  | 8.9   | 4.0   |
| 9/16" x 18    | 09       | 10                | 3/8 | 06   | U09JF90K06  | 19  | 17.8  | 21.6  | 8.9   | 7.0   |
| 3/4" x 16     | 12       | 10                | 3/8 | 06   | U12JF90K06  | 22  | 20.9  | 26.0  | 10.8  | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2 | 08   | U12JF90K08  | 22  | 21.2  | 26.0  | 10.8  | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

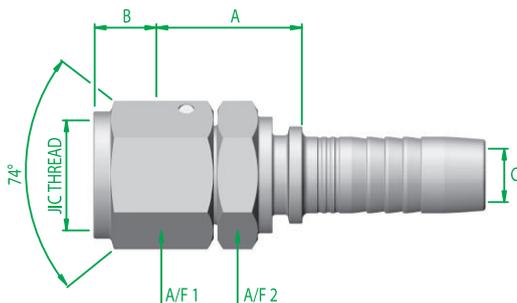


J.I.C. FEMALE EQUAL HEXAGON

WIRED ON NUT

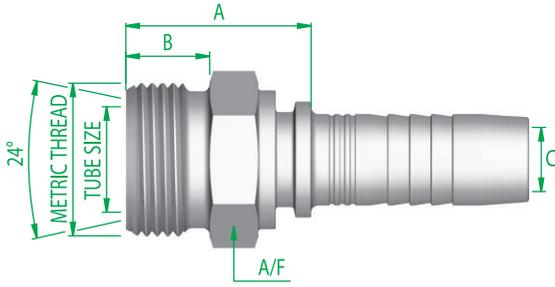
| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F1 | A/F2 | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|------|------|-------|-------|-------|
|               |          | mm                | in    | dash |             |      |      |       |       |       |
| 7/16" x 20    | 07       | 5                 | 3/16  | 03   | U07HJF03    | 14   | 14   | 19.8  | 8.4   | 2.8   |
| 7/16" x 20    | 07       | 6                 | 1/4   | 04   | U07HJF04    | 14   | 14   | 20.3  | 8.4   | 4.0   |
| 9/16" x 18    | 09       | 6                 | 1/4   | 04   | U09HJF04    | 19   | 19   | 22.1  | 8.9   | 4.0   |
| 9/16" x 18    | 09       | 10                | 3/8   | 06   | U09HJF06    | 19   | 19   | 23.1  | 8.9   | 7.0   |
| 3/4" x 16     | 12       | 10                | 3/8   | 06   | U12HJF06    | 22   | 22   | 24.7  | 10.8  | 7.0   |
| 3/4" x 16     | 12       | 12                | 1/2   | 08   | U12HJF08    | 22   | 22   | 25.0  | 10.8  | 9.3   |
| 7/8" x 14     | 14       | 12                | 1/2   | 08   | U14HJF08    | 27   | 27   | 28.2  | 13.7  | 9.3   |
| 3/4" x 16     | 12       | 16                | 5/8   | 10   | U12HJF10    | 22   | 22   | 25.1  | 10.8  | 9.3   |
| 7/8" x 14     | 14       | 16                | 5/8   | 10   | U14HJF10    | 27   | 27   | 28.3  | 13.7  | 12.0  |
| 1-1/16" x 12  | 17       | 16                | 5/8   | 10   | U17HJF10    | 32   | 32   | 31.1  | 15.1  | 12.1  |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | U17HJF12    | 32   | 32   | 32.0  | 15.1  | 15.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | U21HJF12    | 41   | 41   | 35.3  | 16.8  | 15.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | U21HJF16    | 41   | 41   | 36.3  | 16.8  | 19.5  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | U26HJF20    | 50   | 50   | 45.3  | 16.1  | 26.0  |

NOTE: Dim A represents Hose Cut Off Length



## METRIC MALE - DKO 'S'

## HEAVY DUTY

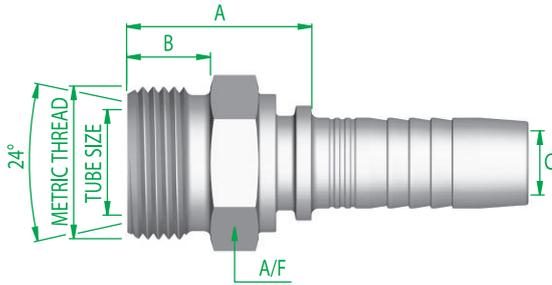


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |           | mm                | in    | dash |             |     |       |       |       |
| M16 x 1.5     | 8         | 6                 | 1/4   | 04   | U16ME08-04  | 17  | 24.4  | 12.0  | 4.0   |
| M18 x 1.5     | 10        | 6                 | 1/4   | 04   | U18ME10-04  | 19  | 24.7  | 12.0  | 4.0   |
| M20 x 1.5     | 12        | 8                 | 5/16  | 05   | U20ME12-05  | 22  | 25.7  | 12.0  | 5.5   |
| M18 x 1.5     | 10        | 10                | 3/8   | 06   | U18ME10-06  | 19  | 25.7  | 12.0  | 7.0   |
| M20 x 1.5     | 12        | 10                | 3/8   | 06   | U20ME12-06  | 22  | 26.2  | 12.0  | 7.0   |
| M22 x 1.5     | 14        | 10                | 3/8   | 06   | U22ME14-06  | 22  | 28.2  | 14.0  | 7.0   |
| M22 x 1.5     | 14        | 12                | 1/2   | 08   | U22ME14-08  | 22  | 28.5  | 14.0  | 9.3   |
| M24 x 1.5     | 16        | 12                | 1/2   | 08   | U24ME16-08  | 24  | 29.7  | 14.0  | 9.3   |
| M30 x 2.0     | 20        | 16                | 5/8   | 10   | U30ME20-10  | 30  | 33.4  | 16.0  | 12.0  |
| M30 x 2.0     | 20        | 19                | 3/4   | 12   | U30ME20-12  | 30  | 34.3  | 16.0  | 15.0  |
| M36 x 2.0     | 25        | 19                | 3/4   | 12   | U36ME25-12  | 36  | 38.0  | 18.0  | 15.0  |
| M42 x 2.0     | 30        | 25                | 1     | 16   | U42ME30-16  | 46  | 46.9  | 20.0  | 19.5  |
| M52 x 2.0     | 38        | 31                | 1-1/4 | 20   | U52ME38-20  | 55  | 49.8  | 22.0  | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

## METRIC MALE - DKO 'L'

## LIGHT DUTY

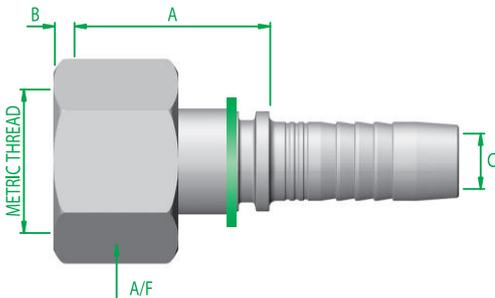


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |           | mm                | in    | dash |             |     |       |       |       |
| M12 x 1.5     | 6         | 6                 | 1/4   | 04   | U12ME06-04  | 14  | 21.1  | 10.0  | 4.0   |
| M14 x 1.5     | 8         | 6                 | 1/4   | 04   | U14ME08-04  | 14  | 21.1  | 10.0  | 4.0   |
| M16 x 1.5     | 10        | 6                 | 1/4   | 04   | U16ME10-04  | 17  | 23.4  | 11.0  | 4.0   |
| M18 x 1.5     | 12        | 8                 | 5/16  | 05   | U18ME12-05  | 19  | 24.2  | 11.0  | 5.5   |
| M16 x 1.5     | 10        | 10                | 3/8   | 06   | U16ME10-06  | 17  | 24.4  | 11.0  | 7.0   |
| M18 x 1.5     | 12        | 10                | 3/8   | 06   | U18ME12-06  | 19  | 24.7  | 11.0  | 7.0   |
| M22 X 1.5     | 15        | 10                | 3/8   | 06   | U22ME15-06  | 22  | 26.2  | 12.0  | 7.0   |
| M22 X 1.5     | 15        | 12                | 1/2   | 08   | U22ME15-08  | 22  | 26.5  | 12.0  | 9.3   |
| M26 x 1.5     | 18        | 12                | 1/2   | 08   | U26ME18-08  | 27  | 28.2  | 12.0  | 9.3   |
| M26 x 1.5     | 18        | 16                | 5/8   | 10   | U26ME18-10  | 27  | 28.3  | 12.0  | 12.0  |
| M30 x 2.0     | 22        | 16                | 5/8   | 10   | U30ME22-10  | 30  | 31.4  | 14.0  | 12.0  |
| M30 x 2.0     | 22        | 19                | 3/4   | 12   | U30ME22-12  | 30  | 32.3  | 14.0  | 15.0  |
| M36 x 2.0     | 28        | 25                | 1     | 16   | U36ME28-16  | 36  | 35.0  | 14.0  | 19.5  |
| M45 x 2.0     | 35        | 31                | 1-1/4 | 20   | U45ME35-20  | 46  | 43.3  | 16.0  | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

## METRIC LOOSE NUT FEMALE - DKO 'S'

## HEAVY DUTY

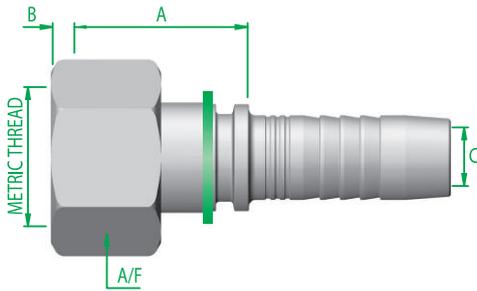


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-------|------|--------------|-----|-------|-------|-------|
|               |           | mm                | in    | dash |              |     |       |       |       |
| M14 x 1.5     | 6         | 6                 | 1/4   | 04   | U14MSOF06-04 | 17  | 26.0  | 3.5   | 2.8   |
| M16 x 1.5     | 8         | 6                 | 1/4   | 04   | U16MSOF08-04 | 19  | 26.2  | 2.8   | 4.0   |
| M18 x 1.5     | 10        | 6                 | 1/4   | 04   | U18MSOF10-04 | 22  | 27.2  | 3.4   | 4.0   |
| M18 x 1.5     | 10        | 8                 | 5/16  | 05   | U18MSOF10-05 | 22  | 27.2  | 3.4   | 5.5   |
| M20 x 1.5     | 12        | 8                 | 5/16  | 05   | U20MSOF12-05 | 24  | 27.3  | 3.6   | 5.5   |
| M18 x 1.5     | 10        | 10                | 3/8   | 06   | U18MSOF10-06 | 22  | 27.7  | 3.4   | 4.6   |
| M20 x 1.5     | 12        | 10                | 3/8   | 06   | U20MSOF12-06 | 24  | 27.8  | 3.6   | 7.0   |
| M22 x 1.5     | 14        | 10                | 3/8   | 06   | U22MSOF14-06 | 27  | 31.5  | 3.6   | 7.0   |
| M24 x 1.5     | 16        | 12                | 1/2   | 08   | U24MSOF16-08 | 30  | 32.5  | 3.3   | 9.3   |
| M30 x 2.0     | 20        | 16                | 5/8   | 10   | U30MSOF20-10 | 36  | 38.6  | 2.0   | 12.0  |
| M30 x 2.0     | 20        | 19                | 3/4   | 12   | U30MSOF20-12 | 36  | 39.5  | 2.0   | 13.0  |
| M36 x 2.0     | 25        | 19                | 3/4   | 12   | U36MSOF25-12 | 46  | 41.9  | 3.9   | 15.0  |
| M36 x 2.0     | 25        | 25                | 1     | 16   | U36MSOF25-16 | 46  | 42.9  | 3.9   | 15.0  |
| M42 x 2.0     | 30        | 25                | 1     | 16   | U42MSOF30-16 | 50  | 44.9  | 5.5   | 19.5  |
| M52 x 2.0     | 38        | 31                | 1-1/4 | 20   | U52MSOF38-20 | 60  | 48.8  | 7.9   | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

METRIC LOOSE NUT FEMALE - DKO 'L'

LIGHT DUTY

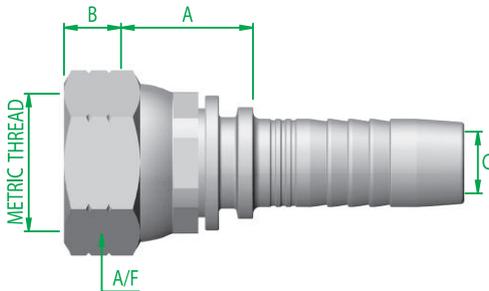


| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C |
|--------------------|-----------|-------------------|-------|------|--------------|-----|-------|-------|-------|
|                    |           | mm                | in    | dash |              |     |       |       |       |
| M14 x 1.5          | 8         | 6                 | 1/4   | 04   | U14MSOF08-04 | 17  | 24.2  | 1.8   | 4.0   |
| M16 x 1.5          | 10        | 6                 | 1/4   | 04   | U16MSOF10-04 | 19  | 25.2  | 2.6   | 4.0   |
| M18 x 1.5          | 12        | 6                 | 1/4   | 04   | U18MSOF12-04 | 22  | 27.4  | 2.6   | 4.0   |
| M16 x 1.5          | 10        | 8                 | 5/16  | 05   | U16MSOF10-05 | 19  | 25.2  | 2.6   | 5.5   |
| M18 x 1.5          | 12        | 8                 | 5/16  | 05   | U18MSOF12-05 | 22  | 25.4  | 2.6   | 5.5   |
| M18 x 1.5          | 12        | 10                | 3/8   | 06   | U18MSOF12-06 | 22  | 25.9  | 2.6   | 7.0   |
| M22 x 1.5          | 15        | 10                | 3/8   | 06   | U22MSOF15-06 | 27  | 29.4  | 3.4   | 7.0   |
| M22 x 1.5          | 15        | 12                | 1/2   | 08   | U22MSOF15-08 | 27  | 27.2  | 3.4   | 9.3   |
| M26 x 1.5          | 18        | 12                | 1/2   | 08   | U26MSOF18-08 | 32  | 31.8  | 3.6   | 9.3   |
| M26 x 1.5          | 18        | 16                | 5/8   | 10   | U26MSOF18-10 | 32  | 29.4  | 3.6   | 12.0  |
| M30 x 2.0          | 22        | 19                | 3/4   | 12   | U30MSOF22-12 | 36  | 32.2  | 4.5   | 15.0  |
| M36 x 2.0          | 28        | 25                | 1     | 16   | U36MSOF28-16 | 41  | 34.1  | 4.5   | 19.5  |
| M45 x 2.0          | 35        | 31                | 1-1/4 | 20   | U45MSOF35-20 | 50  | 38.1  | 4.9   | 26.0  |
| M52 x 2.0          | 42        | 38                | 1-1/2 | 24   | U52MSOF42-24 | 60  | 38.3  | 4.6   | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

METRIC CRIMPED NUT FEMALE - DKO 'L'

LIGHT DUTY

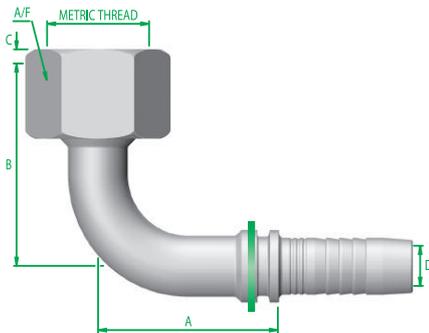


| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |      |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C |
|--------------------|-----------|-------------------|------|------|--------------|-----|-------|-------|-------|
|                    |           | mm                | in   | dash |              |     |       |       |       |
| M12 x 1.5          | 6         | 5                 | 3/16 | 03   | U12MSOF06-03 | 17  | 17.9  | 2.0   | 2.8   |
| M12 x 1.5          | 6         | 6                 | 1/4  | 04   | U12MSOF06-04 | 17  | 18.4  | 2.0   | 2.8   |
| M16 x 1.5          | 10        | 10                | 3/8  | 06   | U16MSOF10-06 | 19  | 22.2  | 2.8   | 5.6   |

NOTE: Dim A represents Hose Cut Off Length

METRIC LOOSE NUT FEMALE DKO 'S' 90° SWEEP ELBOW

HEAVY DUTY

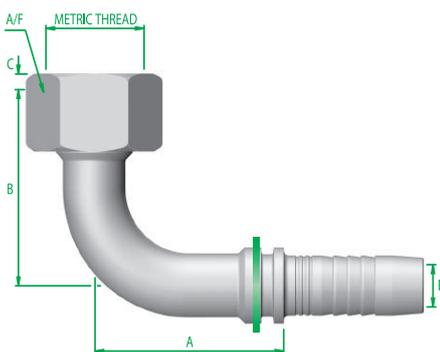


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|-----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|               |           | mm                | in    | dash |                 |     |       |       |       |       |
| M16 x 1.5     | 8         | 6                 | 1/4   | 04   | U16MSOF08-90S04 | 19  | 27.2  | 35.2  | 2.8   | 4.0   |
| M18 x 1.5     | 10        | 6                 | 1/4   | 04   | U18MSOF10-90S04 | 22  | 27.2  | 34.8  | 3.4   | 4.0   |
| M20 x 1.5     | 12        | 8                 | 5/16  | 05   | U20MSOF12-90S05 | 24  | 28.7  | 36.4  | 3.6   | 5.5   |
| M20 x 1.5     | 12        | 10                | 3/8   | 06   | U20MSOF12-90S06 | 24  | 31.5  | 36.5  | 3.6   | 7.0   |
| M22 x 1.5     | 14        | 10                | 3/8   | 06   | U22MSOF14-90S06 | 27  | 31.5  | 41.0  | 3.6   | 7.0   |
| M24 x 1.5     | 16        | 12                | 1/2   | 08   | U24MSOF16-90S08 | 30  | 42.3  | 46.5  | 3.3   | 9.3   |
| M30 x 2.0     | 20        | 16                | 5/8   | 10   | U30MSOF20-90S10 | 36  | 47.6  | 58.5  | 2.0   | 12.0  |
| M36 x 2.0     | 25        | 19                | 3/4   | 12   | U36MSOF25-90S12 | 46  | 53.8  | 68.0  | 3.9   | 15.0  |
| M42 x 2.0     | 30        | 25                | 1     | 16   | U42MSOF30-90S16 | 50  | 63.8  | 79.1  | 5.5   | 19.5  |
| M52 x 2.0     | 38        | 31                | 1-1/4 | 20   | U52MSOF38-90S20 | 60  | 80.5  | 92.7  | 7.9   | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

METRIC LOOSE NUT FEMALE DKO 'L' 90° SWEEP ELBOW

LIGHT DUTY



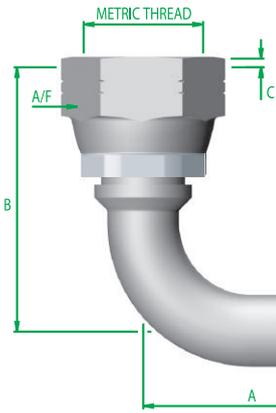
| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------------|-----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|                    |           | mm                | in    | dash |                 |     |       |       |       |       |
| M14 x 1.5          | 8         | 6                 | 1/4   | 04   | U14MSOF08-90S04 | 17  | 27.2  | 32.9  | 1.8   | 4.0   |
| M16 x 1.5          | 10        | 6                 | 1/4   | 04   | U16MSOF10-90S04 | 19  | 27.2  | 34.0  | 2.6   | 4.0   |
| M16 x 1.5          | 10        | 8                 | 5/16  | 05   | U16MSOF10-90S05 | 19  | 28.7  | 35.3  | 2.6   | 5.5   |
| M18 x 1.5          | 12        | 10                | 3/8   | 06   | U18MSOF12-90S06 | 22  | 31.5  | 37.2  | 2.6   | 7.0   |
| M22 x 1.5          | 15        | 12                | 1/2   | 08   | U22MSOF15-90S08 | 27  | 42.3  | 42.6  | 3.4   | 9.3   |
| M26 x 1.5          | 18        | 12                | 1/2   | 08   | U26MSOF18-90S08 | 32  | 42.3  | 44.9  | 3.6   | 9.3   |
| M26 x 1.5          | 18        | 16                | 5/8   | 10   | U26MSOF18-90S10 | 32  | 47.6  | 51.5  | 3.6   | 12.0  |
| M30 x 2.0          | 22        | 19                | 3/4   | 12   | U30MSOF22-90S12 | 36  | 53.8  | 59.5  | 4.5   | 15.0  |
| M36 x 2.0          | 28        | 25                | 1     | 16   | U36MSOF28-90S16 | 41  | 63.8  | 72.1  | 4.5   | 19.5  |
| M45 x 2.0          | 35        | 31                | 1-1/4 | 20   | U45MSOF35-90S20 | 50  | 80.6  | 86.4  | 4.9   | 26.0  |
| M52 x 2.0          | 42        | 38                | 1-1/2 | 24   | U52MSOF42-90S24 | 60  | 106.9 | 107.0 | 4.6   | 32.0  |

NOTE: Dim A represents Hose Cut Off Length



## METRIC CRIMPED NUT FEMALE DKO 'L' 90° SWEEP ELBOW

LIGHT DUTY

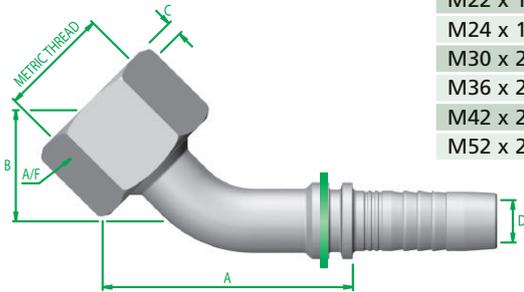


| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------------|-----------|-------------------|-----|------|-----------------|-----|-------|-------|-------|-------|
|                    |           | mm                | in  | dash |                 |     |       |       |       |       |
| M12 x 1.5          | 6         | 6                 | 1/4 | 04   | U12MSOF06-90S04 | 17  | 27.2  | 34.0  | 2.0   | 2.8   |
| M16 x 1.5          | 10        | 10                | 3/8 | 06   | U16MSOF10-90S06 | 19  | 31.5  | 39.4  | 2.8   | 5.6   |

NOTE: Dim A represents Hose Cut Off Length

## METRIC LOOSE NUT FEMALE DKO 'S' 45° SWEEP ELBOW

HEAVY DUTY

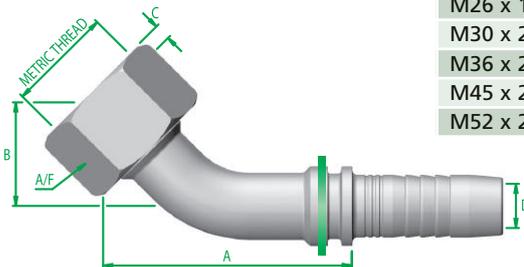


| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------------|-----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|                    |           | mm                | in    | dash |                 |     |       |       |       |       |
| M20 x 1.5          | 12        | 10                | 3/8   | 06   | U20MSOF12-45S06 | 24  | 40.8  | 19.0  | 3.6   | 7.0   |
| M22 x 1.5          | 14        | 10                | 3/8   | 06   | U22MSOF14-45S06 | 27  | 44.0  | 22.0  | 3.6   | 7.0   |
| M24 x 1.5          | 16        | 12                | 1/2   | 08   | U24MSOF16-45S08 | 30  | 54.1  | 23.2  | 3.3   | 9.3   |
| M30 x 2.0          | 20        | 16                | 5/8   | 10   | U30MSOF20-45S10 | 36  | 63.0  | 31.2  | 2.0   | 12.0  |
| M36 x 2.0          | 25        | 19                | 3/4   | 12   | U36MSOF25-45S12 | 46  | 70.1  | 34.9  | 3.9   | 15.0  |
| M42 x 2.0          | 30        | 25                | 1     | 16   | U42MSOF30-45S16 | 50  | 80.8  | 39.8  | 5.5   | 19.5  |
| M52 x 2.0          | 38        | 31                | 1-1/4 | 20   | U52MSOF38-45S20 | 60  | 99.4  | 47.0  | 7.9   | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

## METRIC LOOSE NUT FEMALE DKO 'L' 45° SWEEP ELBOW

LIGHT DUTY

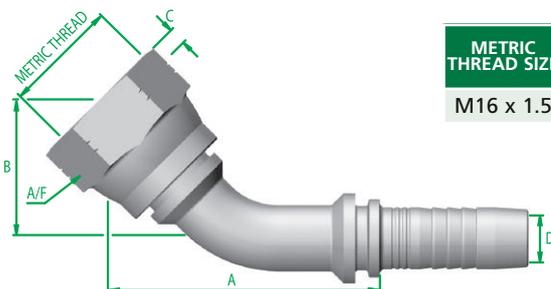


| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------------|-----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|                    |           | mm                | in    | dash |                 |     |       |       |       |       |
| M14 x 1.5          | 8         | 6                 | 1/4   | 04   | U14MSOF08-45S04 | 17  | 36.4  | 17.4  | 1.8   | 4.0   |
| M16 x 1.5          | 10        | 6                 | 1/4   | 04   | U16MSOF10-45S04 | 19  | 37.3  | 18.3  | 2.6   | 4.0   |
| M16 x 1.5          | 10        | 8                 | 5/16  | 05   | U16MSOF10-45S05 | 19  | 37.7  | 17.8  | 2.6   | 5.5   |
| M18 x 1.5          | 12        | 10                | 3/8   | 06   | U18MSOF12-45S06 | 22  | 41.3  | 19.5  | 2.6   | 7.0   |
| M22 x 1.5          | 15        | 12                | 1/2   | 08   | U22MSOF15-45S08 | 27  | 51.4  | 21.4  | 3.4   | 9.3   |
| M26 x 1.5          | 18        | 16                | 5/8   | 10   | U26MSOF18-45S10 | 32  | 57.0  | 25.2  | 3.6   | 12.0  |
| M30 x 2.0          | 22        | 19                | 3/4   | 12   | U30MSOF22-45S12 | 36  | 64.1  | 28.9  | 4.5   | 15.0  |
| M36 x 2.0          | 28        | 25                | 1     | 16   | U36MSOF28-45S16 | 41  | 75.8  | 34.8  | 4.5   | 19.5  |
| M45 x 2.0          | 35        | 31                | 1-1/4 | 20   | U45MSOF35-45S20 | 50  | 93.7  | 41.6  | 4.9   | 26.0  |
| M52 x 2.0          | 42        | 38                | 1-1/2 | 24   | U52MSOF42-45S24 | 60  | 122.6 | 50.8  | 4.6   | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

## METRIC CRIMPED NUT FEMALE DKO 'L' 45° SWEEP ELBOW

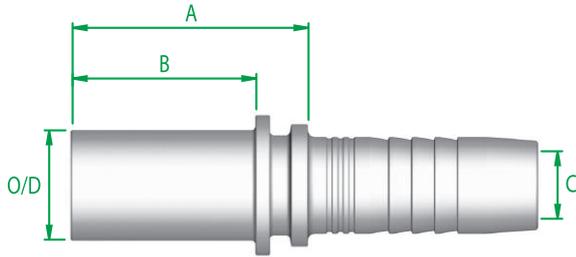
LIGHT DUTY



| METRIC THREAD SIZE | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------------|-----------|-------------------|-----|------|-----------------|-----|-------|-------|-------|-------|
|                    |           | mm                | in  | dash |                 |     |       |       |       |       |
| M16 x 1.5          | 10        | 10                | 3/8 | 06   | U16MSOF10-45S06 | 19  | 42.5  | 20.6  | 2.8   | 5.6   |

NOTE: Dim A represents Hose Cut Off Length

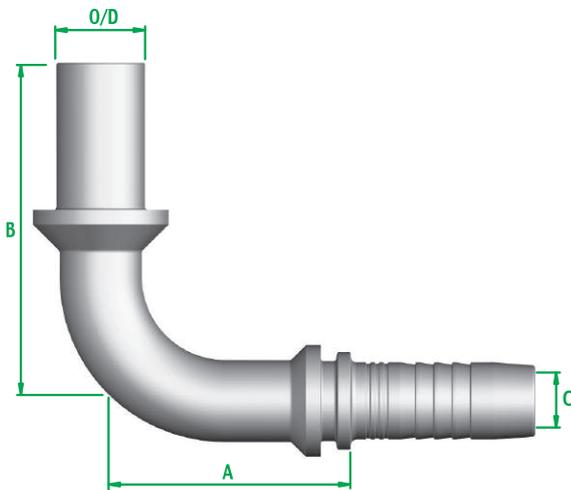
METRIC STANDPIPE



| O/D mm | NOMINAL HOSE BORE |      |      | PART NUMBER | Dim A | Dim B | Dim C |
|--------|-------------------|------|------|-------------|-------|-------|-------|
|        | mm                | in   | dash |             |       |       |       |
| 6      | 5                 | 3/16 | 03   | U06MS03     | 27.8  | 22.0  | 2.8   |
| 6      | 6                 | 1/4  | 04   | U06MS04     | 28.3  | 22.0  | 3.0   |
| 8      | 5                 | 3/16 | 03   | U08MS03     | 29.8  | 24.0  | 2.8   |
| 8      | 6                 | 1/4  | 04   | U08MS04     | 30.3  | 24.0  | 4.0   |
| 10     | 6                 | 1/4  | 04   | U10MS04     | 32.3  | 26.0  | 4.0   |
| 12     | 6                 | 1/4  | 04   | U12MS04     | 32.3  | 26.0  | 4.0   |
| 10     | 8                 | 5/16 | 05   | U10MS05     | 32.3  | 26.0  | 5.5   |
| 12     | 8                 | 5/16 | 05   | U12MS05     | 32.9  | 26.0  | 5.5   |
| 10     | 10                | 3/8  | 06   | U10MS06     | 32.8  | 26.0  | 6.0   |
| 12     | 10                | 3/8  | 06   | U12MS06     | 32.8  | 26.0  | 7.0   |
| 15     | 10                | 3/8  | 06   | U15MS06     | 31.8  | 25.0  | 7.0   |
| 16     | 10                | 3/8  | 06   | U16MS06     | 36.8  | 30.0  | 7.0   |
| 12     | 12                | 1/2  | 08   | U12MS08     | 33.1  | 26.0  | 7.5   |
| 14     | 12                | 1/2  | 08   | U14MS08     | 36.1  | 29.0  | 9.0   |
| 15     | 12                | 1/2  | 08   | U15MS08     | 32.1  | 25.0  | 9.3   |
| 16     | 12                | 1/2  | 08   | U16MS08     | 37.1  | 30.0  | 9.3   |
| 18     | 12                | 1/2  | 08   | U18MS08     | 33.1  | 26.0  | 9.3   |
| 18     | 16                | 5/8  | 10   | U18MS10     | 33.7  | 26.0  | 12.0  |
| 20     | 16                | 5/8  | 10   | U20MS10     | 43.7  | 36.0  | 12.0  |
| 18     | 19                | 3/4  | 12   | U18MS12     | 34.6  | 26.0  | 13.5  |
| 20     | 19                | 3/4  | 12   | U20MS12     | 44.6  | 36.0  | 13.1  |
| 22     | 19                | 3/4  | 12   | U22MS12     | 36.6  | 28.0  | 15.0  |
| 25     | 19                | 3/4  | 12   | U25MS12     | 48.6  | 40.0  | 15.0  |
| 25     | 25                | 1    | 16   | U25MS16     | 50.6  | 40.0  | 19.0  |
| 28     | 25                | 1    | 16   | U28MS16     | 40.6  | 30.0  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

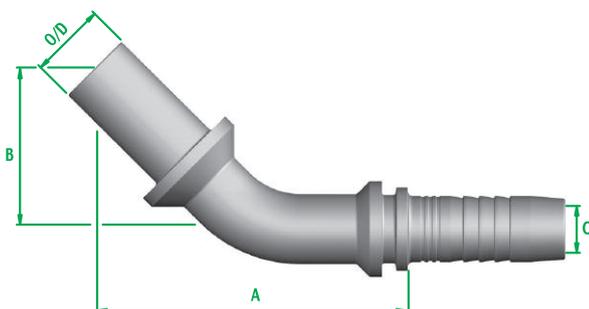
METRIC STANDPIPE 90° SWEPT ELBOW



| O/D mm | NOMINAL HOSE BORE |      |      | PART NUMBER | Dim A | Dim B | Dim C |
|--------|-------------------|------|------|-------------|-------|-------|-------|
|        | mm                | in   | dash |             |       |       |       |
| 6      | 6                 | 1/4  | 04   | U06MS90S04  | 27.2  | 45.2  | 3.0   |
| 8      | 6                 | 1/4  | 04   | U08MS90S04  | 27.2  | 47.2  | 4.0   |
| 10     | 6                 | 1/4  | 04   | U10MS90S04  | 27.2  | 49.2  | 4.0   |
| 10     | 8                 | 5/16 | 05   | U10MS90S05  | 28.7  | 51.9  | 5.5   |
| 12     | 8                 | 5/16 | 05   | U12MS90S05  | 28.7  | 51.9  | 5.5   |
| 10     | 10                | 3/8  | 06   | U10MS90S06  | 31.5  | 51.9  | 6.0   |
| 12     | 10                | 3/8  | 06   | U12MS90S06  | 31.5  | 51.9  | 7.0   |
| 12     | 12                | 1/2  | 08   | U12MS90S08  | 42.3  | 56.5  | 7.5   |
| 15     | 12                | 1/2  | 08   | U15MS90S08  | 42.3  | 55.5  | 9.3   |
| 16     | 12                | 1/2  | 08   | U16MS90S08  | 42.3  | 60.5  | 9.3   |
| 18     | 16                | 5/8  | 10   | U18MS90S10  | 47.6  | 65.8  | 12.0  |
| 20     | 19                | 3/4  | 12   | U20MS90S12  | 53.8  | 83.3  | 13.1  |
| 22     | 19                | 3/4  | 12   | U22MS90S12  | 53.8  | 75.3  | 15.0  |
| 25     | 25                | 1    | 16   | U25MS90S16  | 63.8  | 101.6 | 19.0  |
| 28     | 25                | 1    | 16   | U28MS90S16  | 63.8  | 91.6  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

METRIC STANDPIPE 45° SWEPT ELBOW

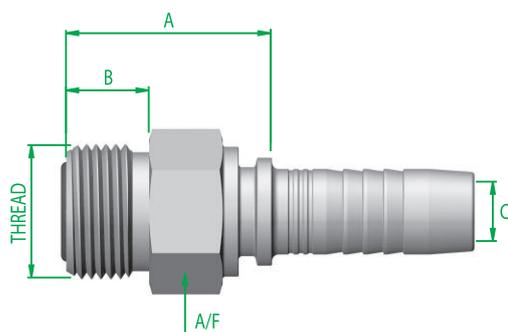


| O/D mm | NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B | Dim C |
|--------|-------------------|-----|------|-------------|-------|-------|-------|
|        | mm                | in  | dash |             |       |       |       |
| 6      | 6                 | 1/4 | 04   | U06MS45S04  | 45.1  | 26.2  | 3.0   |
| 8      | 6                 | 1/4 | 04   | U08MS45S04  | 46.6  | 27.6  | 4.0   |
| 10     | 6                 | 1/4 | 04   | U10MS45S04  | 48.0  | 29.0  | 4.0   |
| 12     | 10                | 3/8 | 06   | U12MS45S06  | 51.7  | 29.9  | 7.0   |
| 12     | 12                | 1/2 | 08   | U12MS45S08  | 61.3  | 31.3  | 7.5   |
| 15     | 12                | 1/2 | 08   | U15MS45S08  | 60.5  | 30.6  | 9.3   |
| 16     | 12                | 1/2 | 08   | U16MS45S08  | 64.1  | 34.1  | 9.3   |

NOTE: Dim A represents Hose Cut Off Length



## O.R.F.S MALE

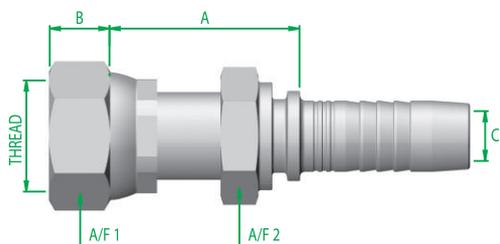


| THREAD SIZE  | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|--------------|-----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|              |           | mm                | in  | dash |             |     |       |       |       |
| 9/16" x 18   | 04        | 6                 | 1/4 | 04   | U04ORM04    | 17  | 24.4  | 9.9   | 4.0   |
| 11/16" x 16  | 06        | 10                | 3/8 | 06   | U06ORM06    | 19  | 26.3  | 11.2  | 6.6   |
| 13/16" x 16  | 08        | 12                | 1/2 | 08   | U08ORM08    | 22  | 29.2  | 12.8  | 9.3   |
| 1-3/16" x 12 | 12        | 19                | 3/4 | 12   | U12ORM12    | 32  | 38.3  | 17.0  | 15.0  |
| 1-7/16" x 12 | 16        | 25                | 1   | 16   | U16ORM16    | 41  | 43.9  | 17.5  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

## O.R.F.S CRIMPED NUT FEMALE

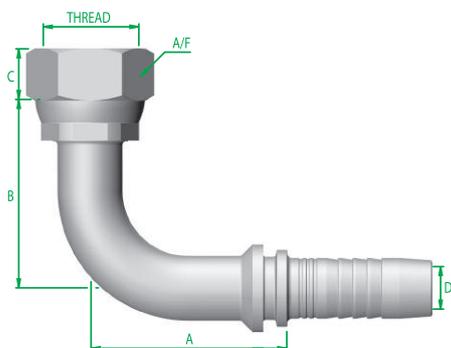
### WITH DOUBLE HEXAGON



| THREAD SIZE   | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F1 | A/F2 | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-------|------|-------------|------|------|-------|-------|-------|
|               |           | mm                | in    | dash |             |      |      |       |       |       |
| 9/16" x 18    | 04        | 6                 | 1/4   | 04   | U04ORF04    | 17   | 14   | 27.1  | 8.2   | 4.0   |
| 11/16" x 16   | 06        | 6                 | 1/4   | 04   | U06ORF04    | 22   | 17   | 30.5  | 9.5   | 4.0   |
| 11/16" x 16   | 06        | 8                 | 5/16  | 05   | U06ORF05    | 22   | 17   | 31.0  | 9.5   | 5.5   |
| 11/16" x 16   | 06        | 10                | 3/8   | 06   | U06ORF06    | 22   | 17   | 31.5  | 9.5   | 7.0   |
| 13/16" x 16   | 08        | 10                | 3/8   | 06   | U08ORF06    | 24   | 19   | 34.7  | 11.0  | 7.0   |
| 11/16" x 16   | 06        | 12                | 1/2   | 08   | U06ORF08    | 22   | 22   | 32.6  | 9.5   | 9.3   |
| 13/16" x 16   | 08        | 12                | 1/2   | 08   | U08ORF08    | 24   | 22   | 35.0  | 11.0  | 9.3   |
| 13/16" x 16   | 08        | 16                | 5/8   | 10   | U08ORF10    | 24   | 22   | 32.6  | 11.0  | 9.3   |
| 1" x 14       | 10        | 16                | 5/8   | 10   | U10ORF10    | 30   | 24   | 40.2  | 13.5  | 12.0  |
| 1-3/16" x 12  | 12        | 19                | 3/4   | 12   | U12ORF12    | 36   | 30   | 44.6  | 14.5  | 15.0  |
| 1-7/16" x 12  | 16        | 25                | 1     | 16   | U16ORF16    | 41   | 36   | 48.1  | 14.8  | 19.5  |
| 1-11/16" x 12 | 20        | 31                | 1-1/4 | 20   | U20ORF20    | 50   | 41   | 52.6  | 14.5  | 26.0  |
| 2" x 12       | 24        | 38                | 1-1/2 | 24   | U24ORF24    | 60   | 50   | 61.7  | 14.5  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

## O.R.F.S CRIMPED NUT FEMALE 90° SWEEP ELBOW



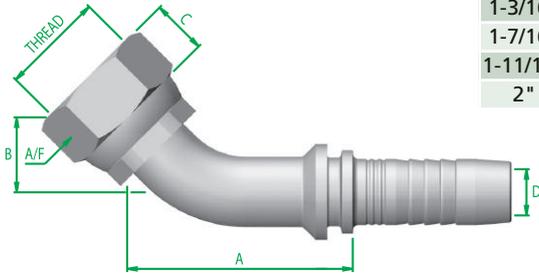
| THREAD SIZE   | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|-----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |           | mm                | in    | dash |             |     |       |       |       |       |
| 9/16" x 18    | 04        | 6                 | 1/4   | 04   | U04ORF90S04 | 17  | 27.2  | 32.0  | 8.2   | 4.0   |
| 11/16" x 16   | 06        | 6                 | 1/4   | 04   | U06ORF90S04 | 22  | 27.2  | 38.0  | 9.5   | 4.0   |
| 11/16" x 16   | 06        | 8                 | 5/16  | 05   | U06ORF90S05 | 22  | 28.7  | 38.0  | 9.5   | 5.5   |
| 11/16" x 16   | 06        | 10                | 3/8   | 06   | U06ORF90S06 | 22  | 31.5  | 38.0  | 9.5   | 7.0   |
| 13/16" x 16   | 08        | 10                | 3/8   | 06   | U08ORF90S06 | 24  | 31.5  | 41.0  | 11.0  | 7.0   |
| 13/16" x 16   | 08        | 12                | 1/2   | 08   | U08ORF90S08 | 24  | 42.3  | 41.0  | 11.0  | 9.3   |
| 1" x 14       | 10        | 12                | 1/2   | 08   | U10ORF90S08 | 30  | 42.3  | 47.0  | 13.5  | 9.3   |
| 1" x 14       | 10        | 16                | 5/8   | 10   | U10ORF90S10 | 30  | 47.6  | 47.0  | 13.5  | 12.0  |
| 1-3/16" x 12  | 12        | 19                | 3/4   | 12   | U12ORF90S12 | 36  | 53.8  | 58.0  | 14.5  | 15.0  |
| 1-7/16" x 12  | 16        | 19                | 3/4   | 12   | U16ORF90S12 | 41  | 53.8  | 71.0  | 14.8  | 15.0  |
| 1-7/16" x 12  | 16        | 25                | 1     | 16   | U16ORF90S16 | 41  | 63.8  | 71.0  | 14.8  | 19.5  |
| 1-11/16" x 12 | 20        | 31                | 1-1/4 | 20   | U20ORF90S20 | 50  | 81.0  | 78.0  | 14.5  | 26.0  |
| 2" x 12       | 24        | 38                | 1-1/2 | 24   | U24ORF90S24 | 60  | 106.4 | 87.0  | 14.5  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

**O.R.F.S CRIMPED NUT FEMALE 45° SWEEP ELBOW**

| THREAD SIZE   | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|-----------|-------------------|-------|------|-------------|-----|-------|-------|-------|-------|
|               |           | mm                | in    | dash |             |     |       |       |       |       |
| 9/16" x 18    | 04        | 6                 | 1/4   | 04   | U04ORF45S04 | 17  | 29.0  | 10.0  | 8.2   | 4.0   |
| 11/16" x 16   | 06        | 6                 | 1/4   | 04   | U06ORF45S04 | 22  | 29.8  | 11.0  | 9.5   | 4.0   |
| 11/16" x 16   | 06        | 8                 | 5/16  | 05   | U06ORF45S05 | 22  | 30.8  | 10.9  | 9.5   | 5.5   |
| 11/16" x 16   | 06        | 10                | 3/8   | 06   | U06ORF45S06 | 22  | 33.3  | 11.5  | 9.5   | 7.0   |
| 13/16" x 16   | 08        | 10                | 3/8   | 06   | U08ORF45S06 | 24  | 35.8  | 15.0  | 11.0  | 7.0   |
| 13/16" x 16   | 08        | 12                | 1/2   | 08   | U08ORF45S08 | 24  | 45.0  | 15.0  | 11.0  | 9.3   |
| 1" x 14       | 10        | 12                | 1/2   | 08   | U10ORF45S08 | 30  | 46.0  | 16.0  | 13.5  | 9.3   |
| 13/16" x 16   | 08        | 16                | 5/8   | 10   | U08ORF45S10 | 24  | 47.1  | 15.0  | 11.0  | 9.3   |
| 1" x 14       | 10        | 16                | 5/8   | 10   | U10ORF45S10 | 30  | 48.5  | 16.8  | 13.5  | 12.0  |
| 1-3/16" x 12  | 12        | 19                | 3/4   | 12   | U12ORF45S12 | 36  | 56.2  | 21.0  | 14.5  | 15.0  |
| 1-7/16" x 12  | 16        | 25                | 1     | 16   | U16ORF45S16 | 41  | 69.7  | 23.8  | 14.8  | 19.5  |
| 1-11/16" x 12 | 20        | 31                | 1-1/4 | 20   | U20ORF45S20 | 50  | 88.2  | 35.1  | 14.5  | 26.0  |
| 2" x 12       | 24        | 38                | 1-1/2 | 24   | U24ORF45S24 | 60  | 112.1 | 40.9  | 14.5  | 32.0  |

NOTE: Dim A represents Hose Cut Off Length

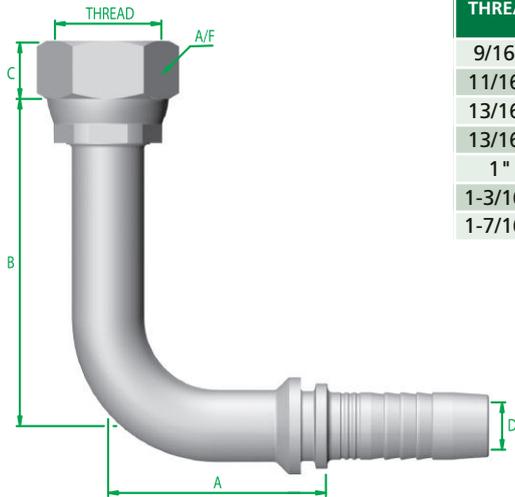


**O.R.F.S CRIMPED NUT FEMALE 90° SWEEP ELBOW**

**LONG DROP**

| THREAD SIZE  | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------|-----------|-------------------|-----|------|--------------|-----|-------|-------|-------|-------|
|              |           | mm                | in  | dash |              |     |       |       |       |       |
| 9/16" x 18   | 04        | 6                 | 1/4 | 04   | U04ORF90SL04 | 17  | 27.2  | 46.0  | 8.2   | 4.0   |
| 11/16" x 16  | 06        | 10                | 3/8 | 06   | U06ORF90SL06 | 22  | 31.5  | 54.0  | 9.5   | 7.0   |
| 13/16" x 16  | 08        | 10                | 3/8 | 06   | U08ORF90SL06 | 24  | 31.5  | 64.0  | 11.0  | 7.0   |
| 13/16" x 16  | 08        | 12                | 1/2 | 08   | U08ORF90SL08 | 24  | 42.3  | 64.0  | 11.0  | 9.3   |
| 1" x 14      | 10        | 16                | 5/8 | 10   | U10ORF90SL10 | 30  | 47.6  | 70.0  | 13.5  | 12.0  |
| 1-3/16" x 12 | 12        | 19                | 3/4 | 12   | U12ORF90SL12 | 36  | 53.8  | 96.0  | 14.5  | 15.0  |
| 1-7/16" x 12 | 16        | 25                | 1   | 16   | U16ORF90SL16 | 41  | 63.8  | 114.0 | 14.8  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

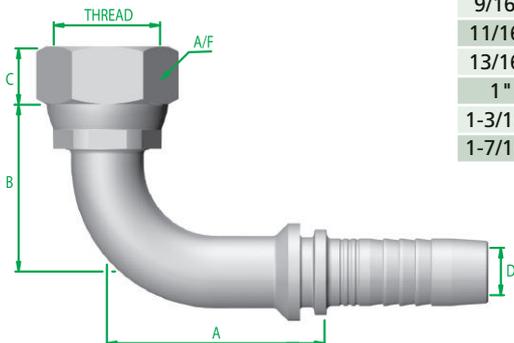


**O.R.F.S CRIMPED NUT FEMALE 90° SWEEP ELBOW**

**SHORT DROP**

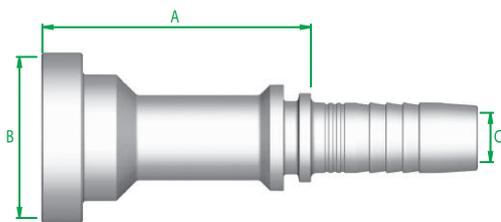
| THREAD SIZE  | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER  | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------|----------|-------------------|-----|------|--------------|-----|-------|-------|-------|-------|
|              |          | mm                | in  | dash |              |     |       |       |       |       |
| 9/16" x 18   | 04       | 6                 | 1/4 | 04   | U04ORF90SS04 | 17  | 27.2  | 22.0  | 8.2   | 4.0   |
| 11/16" x 16  | 06       | 10                | 3/8 | 06   | U06ORF90SS06 | 22  | 31.5  | 24.0  | 9.5   | 7.0   |
| 13/16" x 16  | 08       | 12                | 1/2 | 08   | U08ORF90SS08 | 24  | 42.3  | 30.0  | 11.0  | 9.3   |
| 1" x 14      | 10       | 16                | 5/8 | 10   | U10ORF90SS10 | 30  | 47.6  | 33.0  | 13.5  | 12.0  |
| 1-3/16" x 12 | 12       | 19                | 3/4 | 12   | U12ORF90SS12 | 36  | 53.8  | 48.0  | 14.5  | 15.0  |
| 1-7/16" x 12 | 16       | 25                | 1   | 16   | U16ORF90SS16 | 41  | 63.8  | 56.5  | 14.8  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length



**S.A.E. / I.S.O. FLANGE STRAIGHT INSERT**

CODE 61

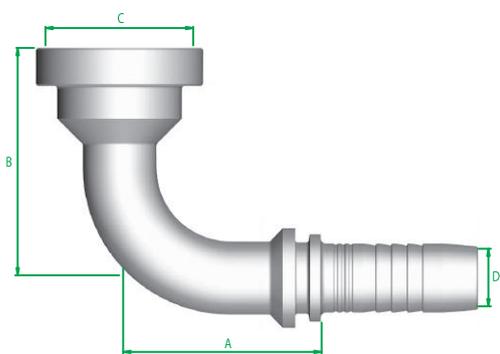


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER | Dim A | Dim B | Dim C |
|---------------------|-------|------|-------------------|-------|------|-------------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |             |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH-3-08 | 46.0  | 30.2  | 9.3   |
| 19                  | 3/4   | 12   | 12                | 1/2   | 08   | U12SFH-3-08 | 46.5  | 38.1  | 9.3   |
| 19                  | 3/4   | 12   | 16                | 5/8   | 10   | U12SFH-3-10 | 47.9  | 38.1  | 12.0  |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH-3-12 | 47.5  | 38.1  | 15.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | U16SFH-3-12 | 65.6  | 44.5  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH-3-16 | 66.4  | 44.5  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH-3-16 | 72.1  | 50.8  | 19.5  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH-3-20 | 71.2  | 50.8  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | U24SFH-3-20 | 78.8  | 60.4  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH-3-24 | 77.9  | 60.4  | 32.0  |
| 51                  | 2     | 32   | 38                | 1-1/2 | 24   | U32SFH-3-24 | 75.4  | 71.4  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH-3-32 | 78.7  | 71.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**S.A.E. / I.S.O. FLANGE 90° SWEPT ELBOW**

CODE 61

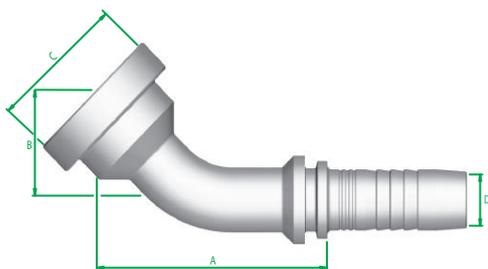


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER    | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|----------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                |       |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH90S-3-08 | 42.3  | 42.0  | 30.2  | 9.3   |
| 19                  | 3/4   | 12   | 16                | 5/8   | 10   | U12SFH90S-3-10 | 52.6  | 53.1  | 38.1  | 12.0  |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH90S-3-12 | 58.0  | 58.0  | 38.1  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH90S-3-16 | 63.8  | 70.0  | 44.5  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH90S-3-16 | 63.8  | 70.0  | 50.8  | 19.5  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH90S-3-20 | 81.0  | 83.9  | 50.8  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | U24SFH90S-3-20 | 81.0  | 87.4  | 60.4  | 26.0  |
| 32                  | 1-1/4 | 20   | 38                | 1-1/2 | 24   | U20SFH90S-3-24 | 106.4 | 100.5 | 50.8  | 32.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH90S-3-24 | 106.4 | 104.0 | 60.4  | 32.0  |
| 51                  | 2     | 32   | 38                | 1-1/2 | 24   | U32SFH90S-3-24 | 106.4 | 108.7 | 71.4  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH90S-3-32 | 137.5 | 138.7 | 71.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**S.A.E. / I.S.O. FLANGE 45° SWEPT ELBOW**

CODE 61

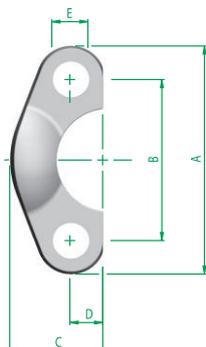


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER    | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|----------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                |       |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH45S-3-08 | 51.0  | 21.0  | 30.2  | 9.3   |
| 19                  | 3/4   | 12   | 12                | 1/2   | 08   | U12SFH45S-3-08 | 53.7  | 23.6  | 38.1  | 9.3   |
| 19                  | 3/4   | 12   | 16                | 5/8   | 10   | U12SFH45S-3-10 | 58.2  | 26.4  | 38.1  | 12.0  |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH45S-3-12 | 67.3  | 27.9  | 38.1  | 15.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | U16SFH45S-3-12 | 69.4  | 30.0  | 44.5  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH45S-3-16 | 74.3  | 33.3  | 44.5  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH45S-3-16 | 74.3  | 32.3  | 50.8  | 19.5  |
| 25                  | 1     | 16   | 31                | 1-1/4 | 20   | U16SFH45S-3-20 | 90.4  | 37.7  | 44.5  | 26.0  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH45S-3-20 | 92.1  | 39.4  | 50.8  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH45S-3-24 | 117.2 | 46.0  | 60.4  | 32.0  |
| 51                  | 2     | 32   | 38                | 1-1/2 | 24   | U32SFH45S-3-24 | 123.3 | 52.0  | 71.4  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH45S-3-32 | 159.0 | 66.4  | 71.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

**S.A.E. / I.S.O. SPLIT FLANGE CLAMPS**

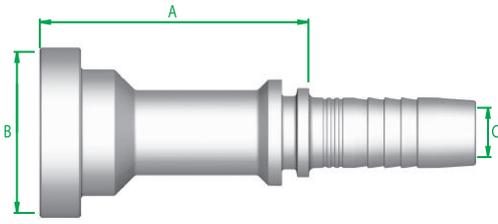
CODE 61



| NOMINAL FLANGE SIZE |       |      | PART NUMBER | Dim A | Dim B | Dim C | Dim D | Dim E |
|---------------------|-------|------|-------------|-------|-------|-------|-------|-------|
| mm                  | in    | dash |             |       |       |       |       |       |
| 13                  | 1/2   | 08   | RX08SFC-3   | 54.0  | 38.1  | 22.8  | 8.8   | 9.0   |
| 19                  | 3/4   | 12   | RX12SFC-3   | 65.0  | 47.6  | 25.9  | 11.2  | 10.3  |
| 25                  | 1     | 16   | RX16SFC-3   | 69.8  | 52.4  | 29.2  | 13.1  | 13.5  |
| 32                  | 1-1/4 | 20   | RX20SFC-3   | 79.3  | 58.7  | 36.3  | 15.1  | 13.5  |
| 38                  | 1-1/2 | 24   | RX24SFC-3   | 93.7  | 69.9  | 41.4  | 17.9  | 16.7  |
| 51                  | 2     | 32   | RX32SFC-3   | 101.6 | 77.8  | 48.2  | 21.5  | 22.2  |

S.A.E. / I.S.O. FLANGE INSERT

CODE 62

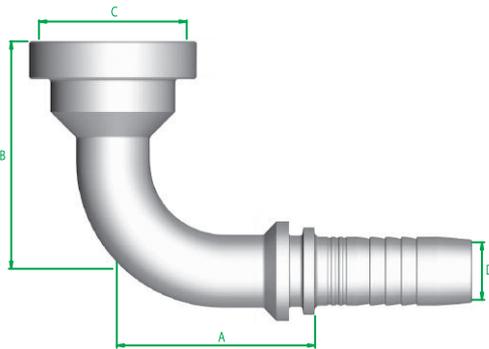


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER | Dim A | Dim B | Dim C |
|---------------------|-------|------|-------------------|-------|------|-------------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |             |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH-6-08 | 47.0  | 31.8  | 9.3   |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH-6-12 | 50.7  | 41.3  | 15.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | U16SFH-6-12 | 70.0  | 47.6  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH-6-16 | 71.3  | 47.6  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH-6-16 | 80.1  | 54.0  | 19.5  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH-6-20 | 80.0  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | U24SFH-6-20 | 78.1  | 63.5  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH-6-24 | 78.4  | 63.5  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH-6-32 | 98.4  | 79.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. / I.S.O. FLANGE 90° SWEEP ELBOW

CODE 62

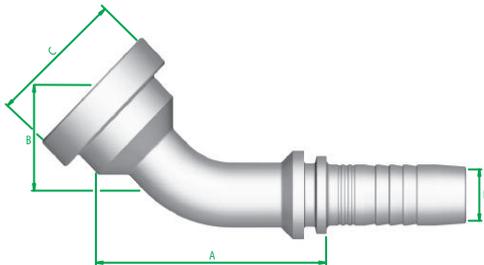


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER    | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|----------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                |       |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH90S-6-08 | 42.3  | 43.0  | 31.8  | 9.3   |
| 19                  | 3/4   | 12   | 16                | 5/8   | 10   | U12SFH90S-6-10 | 56.2  | 56.4  | 41.3  | 12.0  |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH90S-6-12 | 58.0  | 61.0  | 41.3  | 15.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | U16SFH90S-6-12 | 58.0  | 66.4  | 47.6  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH90S-6-16 | 63.8  | 72.0  | 47.6  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH90S-6-16 | 63.8  | 81.1  | 54.0  | 19.5  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH90S-6-20 | 81.0  | 93.9  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | U24SFH90S-6-20 | 81.0  | 99.9  | 63.5  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH90S-6-24 | 106.4 | 120.0 | 63.5  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH90S-6-32 | 137.5 | 160.7 | 79.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. / I.S.O. FLANGE 45° SWEEP ELBOW

CODE 62

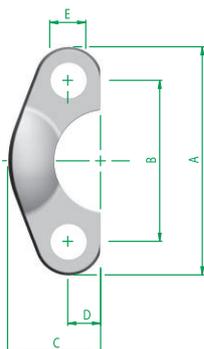


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER    | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|----------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                |       |       |       |       |
| 13                  | 1/2   | 08   | 12                | 1/2   | 08   | U08SFH45S-6-08 | 51.7  | 21.7  | 31.8  | 9.3   |
| 19                  | 3/4   | 12   | 16                | 5/8   | 10   | U12SFH45S-6-10 | 60.5  | 28.7  | 41.3  | 12.0  |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | U12SFH45S-6-12 | 70.1  | 30.7  | 41.3  | 15.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | U16SFH45S-6-12 | 73.2  | 33.8  | 47.6  | 15.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | U16SFH45S-6-16 | 75.7  | 34.8  | 47.6  | 19.5  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | U20SFH45S-6-16 | 82.1  | 41.2  | 54.0  | 19.5  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | U20SFH45S-6-20 | 99.0  | 46.1  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | U24SFH45S-6-20 | 104.2 | 51.4  | 63.5  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | U24SFH45S-6-24 | 131.2 | 60.0  | 63.5  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | U32SFH45S-6-32 | 174.6 | 81.9  | 79.4  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. / I.S.O. SPLIT FLANGE CLAMPS

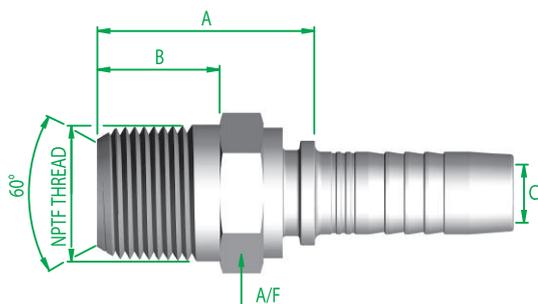
CODE 62



| NOMINAL FLANGE SIZE |       |      | PART NUMBER | Dim A | Dim B | Dim C | Dim D | Dim E |
|---------------------|-------|------|-------------|-------|-------|-------|-------|-------|
| mm                  | in    | dash |             |       |       |       |       |       |
| 13                  | 1/2   | 08   | RX08SFC-6   | 56.3  | 40.5  | 23.6  | 9.0   | 9.0   |
| 19                  | 3/4   | 12   | RX12SFC-6   | 71.4  | 50.8  | 30.0  | 12.0  | 11.0  |
| 25                  | 1     | 16   | RX16SFC-6   | 81.0  | 57.2  | 34.8  | 14.0  | 11.0  |
| 32                  | 1-1/4 | 20   | RX20SFC-6   | 95.2  | 66.7  | 38.6  | 16.0  | 12.0  |
| 38                  | 1-1/2 | 24   | RX24SFC-6   | 112.8 | 79.4  | 47.5  | 18.0  | 13.5  |
| 51                  | 2     | 32   | RX32SFC-6   | 133.3 | 96.8  | 56.9  | 22.0  | 13.5  |



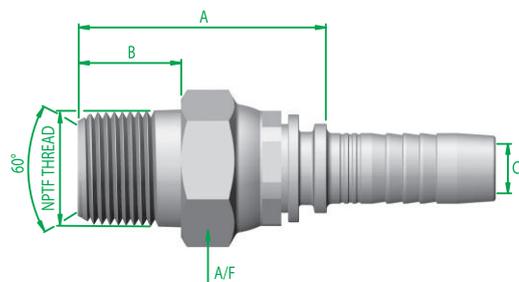
## N.P.T.F. MALE



| N.P.T.F. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in    | dash |             |     |       |       |       |
| 1/8" x 27       | 02       | 5                 | 3/16  | 03   | U02NM03     | 12  | 23.2  | 9.5   | 2.8   |
| 1/4" x 18       | 04       | 5                 | 3/16  | 03   | U04NM03     | 14  | 29.2  | 14.5  | 2.8   |
| 1/8" x 27       | 02       | 6                 | 1/4   | 04   | U02NM04     | 13  | 23.7  | 9.5   | 4.0   |
| 1/4" x 18       | 04       | 6                 | 1/4   | 04   | U04NM04     | 14  | 29.7  | 14.5  | 4.0   |
| 3/8" x 18       | 06       | 6                 | 1/4   | 04   | U06NM04     | 19  | 32.0  | 14.5  | 4.0   |
| 3/8" x 18       | 06       | 8                 | 5/16  | 05   | U06NM05     | 19  | 32.0  | 14.5  | 5.5   |
| 1/4" x 18       | 04       | 10                | 3/8   | 06   | U04NM06     | 17  | 30.2  | 14.5  | 7.0   |
| 3/8" x 18       | 06       | 10                | 3/8   | 06   | U06NM06     | 19  | 32.5  | 14.5  | 7.0   |
| 1/2" x 14       | 08       | 10                | 3/8   | 06   | U08NM06     | 24  | 38.8  | 19.3  | 7.0   |
| 3/8" x 18       | 06       | 12                | 1/2   | 08   | U06NM08     | 19  | 32.8  | 14.5  | 9.3   |
| 1/2" x 14       | 08       | 12                | 1/2   | 08   | U08NM08     | 24  | 39.1  | 19.3  | 9.3   |
| 1/2" x 14       | 08       | 16                | 5/8   | 10   | U08NM10     | 24  | 39.2  | 19.3  | 12.0  |
| 3/4" x 14       | 12       | 16                | 5/8   | 10   | U12NM10     | 27  | 40.5  | 19.3  | 12.0  |
| 3/4" x 14       | 12       | 19                | 3/4   | 12   | U12NM12     | 27  | 41.4  | 19.3  | 15.0  |
| 1" x 11.5       | 16       | 25                | 1     | 16   | U16NM16     | 36  | 46.9  | 23.8  | 19.5  |
| 1-1/4" x 11.5   | 20       | 31                | 1-1/4 | 20   | U20NM20     | 46  | 56.5  | 24.6  | 26.0  |
| 1-1/2" x 11.5   | 24       | 38                | 1-1/2 | 24   | U24NM24     | 50  | 53.8  | 25.4  | 32.0  |
| 2" x 11.5       | 32       | 51                | 2     | 32   | U32NM32     | 65  | 64.0  | 26.2  | 44.0  |

NOTE: Dim A represents Hose Cut Off Length

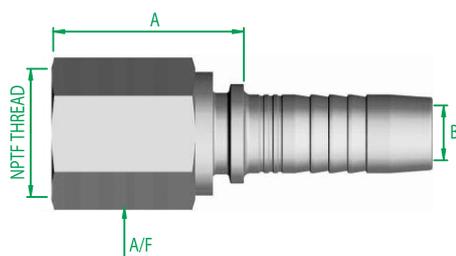
## N.P.T.F. SWIVEL MALE



| N.P.T.F. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in  | dash |             |     |       |       |       |
| 1/4" x 18       | 04       | 6                 | 1/4 | 04   | U04NMS-1-04 | 17  | 38.3  | 14.5  | 4.0   |
| 1/4" x 18       | 04       | 10                | 3/8 | 06   | U04NMS-1-06 | 17  | 38.8  | 14.5  | 4.6   |
| 3/8" x 18       | 06       | 10                | 3/8 | 06   | U06NMS-1-06 | 22  | 39.2  | 14.5  | 7.0   |
| 1/2" x 14       | 08       | 12                | 1/2 | 08   | U08NMS-1-08 | 27  | 45.6  | 19.3  | 9.3   |
| 3/4" x 14       | 12       | 19                | 3/4 | 12   | U12NMS-1-12 | 32  | 49.0  | 19.3  | 15.0  |
| 1" x 11.5       | 16       | 25                | 1   | 16   | U16NMS-1-16 | 38  | 57.7  | 23.8  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

## N.P.T.F. FIXED FEMALE

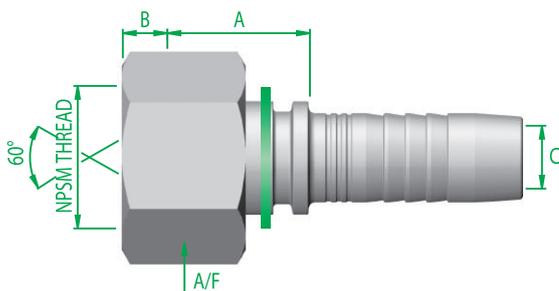


| N.P.T.F. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B |
|-----------------|----------|-------------------|------|------|-------------|-----|-------|-------|
|                 |          | mm                | in   | dash |             |     |       |       |
| 1/4" x 18       | 04       | 5                 | 3/16 | 03   | U04FNF03    | 19  | 24.9  | 2.9   |
| 1/4" x 18       | 04       | 6                 | 1/4  | 04   | U04FNF04    | 19  | 25.4  | 4.0   |
| 3/8" x 18       | 06       | 6                 | 1/4  | 04   | U06FNF04    | 22  | 25.7  | 4.0   |
| 3/8" x 18       | 06       | 10                | 3/8  | 06   | U06FNF06    | 22  | 26.7  | 7.0   |
| 1/2" x 14       | 08       | 10                | 3/8  | 06   | U08FNF06    | 27  | 31.1  | 7.0   |
| 1/2" x 14       | 08       | 12                | 1/2  | 08   | U08FNF08    | 27  | 31.4  | 9.3   |
| 3/4" x 14       | 12       | 19                | 3/4  | 12   | U12FNF12    | 36  | 34.5  | 15.0  |

NOTE: Dim A represents Hose Cut Off Length

## N.P.S.M. FEMALE

## LOOSE NUT Airless paint spray

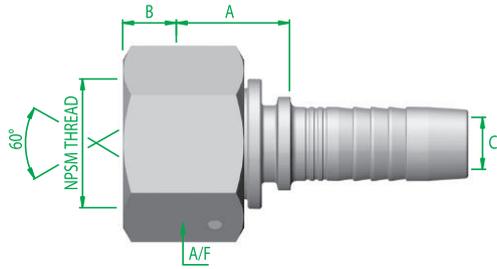


| N.P.S.M. THREAD | DASH No. | NOMINAL HOSE BORE |      |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|------|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in   | dash |             |     |       |       |       |
| 1/4"            | 04       | 5                 | 3/16 | 03   | U04NSF03    | 19  | 16.0  | 4.2   | 2.8   |
| 1/4"            | 04       | 8                 | 1/4  | 04   | U04NSF04    | 19  | 16.5  | 4.2   | 4.0   |
| 3/8"            | 06       | 10                | 3/8  | 06   | U06NSF06    | 22  | 19.6  | 5.3   | 7.0   |
| 1/2"            | 08       | 12                | 1/2  | 08   | U08NSF08    | 27  | 20.8  | 6.4   | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

N.P.S.M. FEMALE

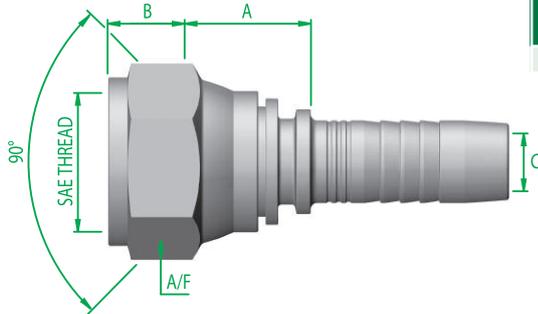
WIRED ON NUT Airless paint spray



| N.P.S.M. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"            | 04       | 10                | 3/8 | 06   | U04NSF06    | 19  | 18.7  | 5.2   | 4.0   |
| 3/8"            | 06       | 12                | 1/2 | 08   | U06NSF08    | 22  | 19.6  | 5.3   | 7.0   |

NOTE: Dim A represents Hose Cut Off Length

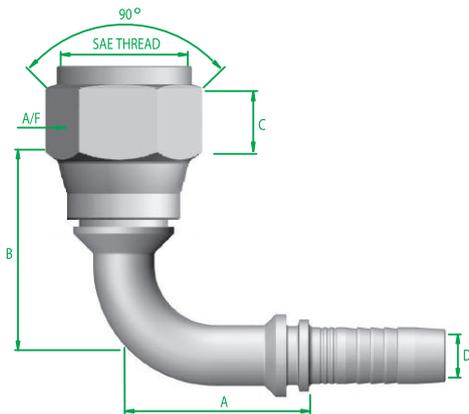
S.A.E. FEMALE



| S.A.E. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 5/8" x 18     | 10       | 10                | 3/8 | 06   | U10SF06     | 19  | 15.8  | 10.2  | 7.0   |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. FEMALE 90° SWEPT ELBOW

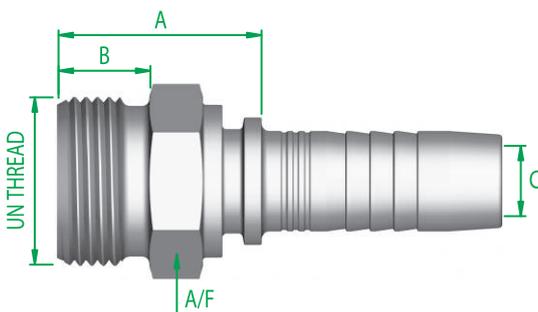


| S.A.E. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |       |
| 5/8" x 18     | 10       | 10                | 3/8 | 06   | U10SF90S06  | 19  | 31.5  | 35.0  | 10.2  | 7.0   |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. MALE

HEAVY DUTY

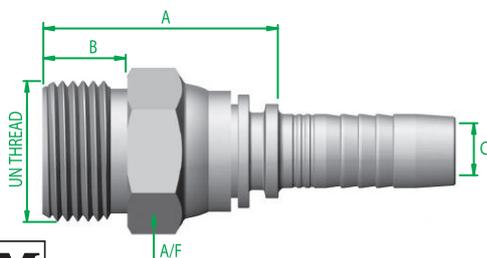


| U.N. THREAD  | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|--------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|              |          | mm                | in    | dash |             |     |       |       |       |
| 7/16" x 20   | 04       | 6                 | 1/4   | 04   | U04SMRH04   | 14  | 26.2  | 11.0  | 4.0   |
| 9/16" x 18   | 06       | 10                | 3/8   | 06   | U06SMRH06   | 17  | 27.7  | 12.0  | 7.0   |
| 3/4" x 16    | 08       | 12                | 1/2   | 08   | U08SMRH08   | 22  | 33.8  | 14.0  | 9.3   |
| 3/4" x 16    | 08       | 16                | 5/8   | 10   | U08SMRH10   | 22  | 33.9  | 14.0  | 9.3   |
| 7/8" x 14    | 10       | 12                | 1/2   | 08   | U10SMRH08   | 27  | 32.0  | 16.0  | 9.3   |
| 7/8" x 14    | 10       | 16                | 5/8   | 10   | U10SMRH10   | 27  | 35.9  | 16.0  | 12.0  |
| 1-1/16" x 12 | 12       | 19                | 3/4   | 12   | U12SMRH12   | 32  | 43.6  | 18.5  | 15.0  |
| 1-5/16" x 12 | 16       | 25                | 1     | 16   | U16SMRH16   | 41  | 45.1  | 18.5  | 19.5  |
| 1-5/8" x 12  | 20       | 31                | 1-1/4 | 20   | U20SMRH20   | 50  | 50.4  | 18.5  | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

S.A.E. SWIVEL MALE

HEAVY DUTY



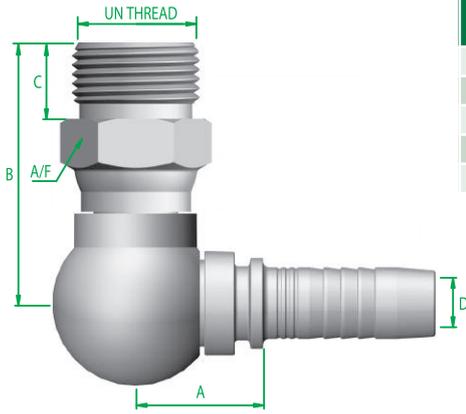
| U.N. THREAD  | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER   | A/F | Dim A | Dim B | Dim C |
|--------------|----------|-------------------|-----|------|---------------|-----|-------|-------|-------|
|              |          | mm                | in  | dash |               |     |       |       |       |
| 9/16" x 18   | 06       | 10                | 3/8 | 06   | U06SMRHS-1-06 | 22  | 42.1  | 12.0  | 7.0   |
| 3/4" x 16    | 08       | 12                | 1/2 | 08   | U08SMRHS-1-08 | 27  | 47.1  | 14.0  | 9.3   |
| 3/4" x 16    | 08       | 16                | 5/8 | 10   | U08SMRHS-1-10 | 27  | 47.1  | 14.0  | 12.0  |
| 7/8" x 14    | 10       | 16                | 5/8 | 10   | U10SMRHS-1-10 | 30  | 51.6  | 16.0  | 12.0  |
| 1-1/16" x 12 | 12       | 19                | 3/4 | 12   | U12SMRHS-1-12 | 32  | 51.6  | 18.5  | 15.0  |

NOTE: Dim A represents Hose Cut Off Length



S.A.E. SWIVEL MALE

HEAVY DUTY

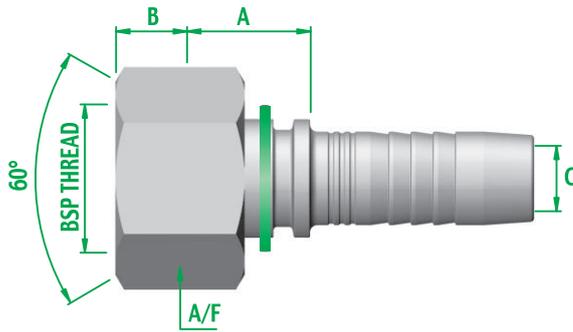


| U.N. THREAD  | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER      | A/F | Dim A | Dim B | Dim C | Dim D |
|--------------|----------|-------------------|-----|------|------------------|-----|-------|-------|-------|-------|
|              |          | mm                | in  | dash |                  |     |       |       |       |       |
| 9/16" x 18   | 06       | 10                | 3/8 | 06   | U06SMRHS-1-90K06 | 22  | 17.8  | 49.3  | 12.0  | 7.0   |
| 3/4" x 16    | 08       | 12                | 1/2 | 08   | U08SMRHS-1-90K08 | 27  | 22.1  | 56.9  | 14.0  | 9.3   |
| 3/4" x 16    | 08       | 16                | 5/8 | 10   | U08SMRHS-1-90S10 | 27  | 22.2  | 56.9  | 14.0  | 12.0  |
| 7/8" x 14    | 10       | 16                | 5/8 | 10   | U10SMRHS-1-90K10 | 30  | 26.8  | 61.8  | 16.0  | 12.0  |
| 1-1/16" x 12 | 12       | 19                | 3/4 | 12   | U12SMRHS-1-90K12 | 32  | 27.2  | 65.7  | 18.5  | 15.0  |

NOTE: Dim A represents Hose Cut Off Length

B.S.P. 60° JIS FEMALE

LOOSE NUT

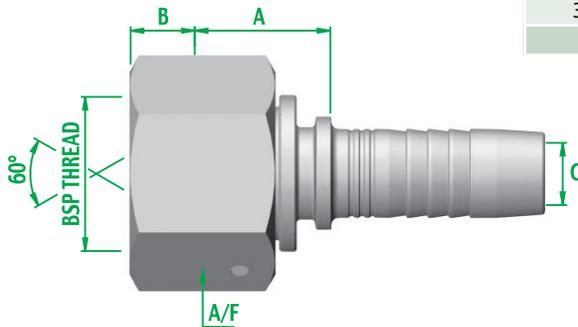


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | U04BJF04    | 19  | 13.6  | 8.1   | 4.0   |
| 3/8"          | 06       | 10                | 3/8 | 06   | U06BJF06    | 22  | 15.8  | 9.8   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | U08BJF08    | 27  | 16.2  | 11.2  | 9.3   |

NOTE: Dim A represents Hose Cut Off Length

B.S.P. 60° JIS FEMALE

WIRED ON NUT

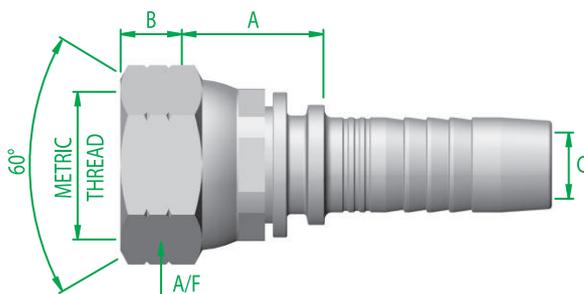


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 3/4"          | 12       | 19                | 3/4 | 12   | U12BJF12    | 32  | 21.3  | 11.9  | 15.0  |
| 1"            | 16       | 25                | 1   | 16   | U16BJF16    | 41  | 24.8  | 13.5  | 19.5  |

NOTE: Dim A represents Hose Cut Off Length

METRIC 60° JIS FEMALE

CRIMPED NUT



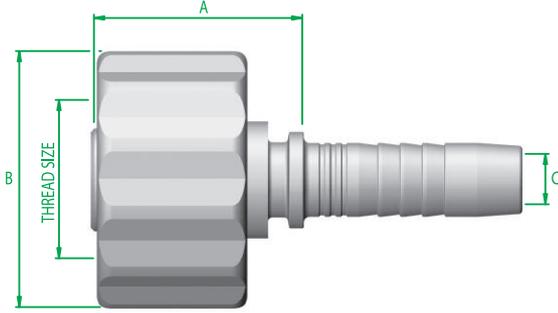
| METRIC THREAD | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               | mm                | in  | dash |             |     |       |       |       |
| M14 x 1.5     | 6                 | 1/4 | 04   | U14MJF04    | 19  | 15.8  | 9.7   | 4.0   |
| M18 x 1.5     | 10                | 3/8 | 06   | U18MJF06    | 22  | 17.3  | 10.0  | 7.0   |
| M22 x 1.5     | 12                | 1/2 | 08   | U22MJF08    | 27  | 17.3  | 11.2  | 9.3   |
| M24 x 1.5     | 16                | 5/8 | 10   | U24MJF10    | 30  | 20.9  | 13.0  | 12.0  |
| M30 x 1.5     | 19                | 3/4 | 12   | U30MJF12    | 36  | 22.3  | 18.5  | 15.0  |

NOTE: Dim A represents Hose Cut Off Length



WATERWASH INSERTS

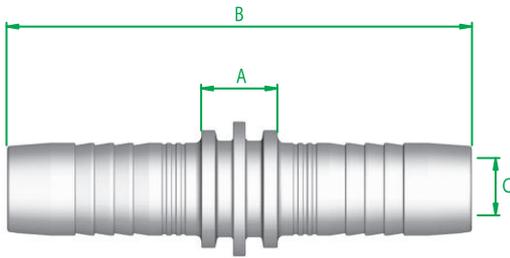
RUBBER COVERED NUT



| METRIC THREAD | NOMINAL HOSE BORE |      |      | PART NUMBER | Dim A | Dim B | Dim C |
|---------------|-------------------|------|------|-------------|-------|-------|-------|
|               | mm                | in   | dash |             |       |       |       |
| M22 x 1.5     | 6                 | 1/4  | 04   | U22RKF04    | 27.3  | 35.0  | 4.0   |
| M22 x 1.5     | 8                 | 5/16 | 05   | U22RKF05    | 27.9  | 35.0  | 5.5   |
| M22 x 1.5     | 10                | 3/8  | 06   | U22RKF06    | 28.3  | 35.0  | 7.0   |

NOTE: Dim A represents Hose Cut Off Length

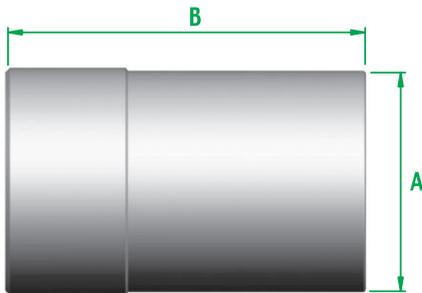
HOSE JOINERS



| NOMINAL HOSE BORE | PART NUMBER | Dim A | Dim B | Dim C |
|-------------------|-------------|-------|-------|-------|
|                   |             |       |       |       |
| 6                 | U04SV04     | 13.6  | 68.6  | 4.0   |
| 8                 | U05SV05     | 13.6  | 69.6  | 5.5   |
| 10                | U06SV06     | 14.6  | 73.4  | 7.0   |
| 12                | U08SV08     | 15.2  | 77.6  | 9.3   |
| 19                | U12SV12     | 17.2  | 90.2  | 15.0  |
| 25                | U16SV16     | 19.2  | 115.6 | 19.5  |

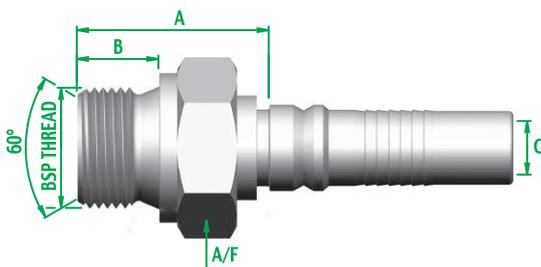
NOTE: Dim A represents Hose Cut Off Length

INTERLOCK FERRULES



| NOMINAL HOSE BORE | PART NUMBER | Dim A | Dim B |
|-------------------|-------------|-------|-------|
|                   |             |       |       |
| 19                | HP12FP      | 38.0  | 60.0  |
| 25                | HP16FP      | 46.0  | 74.5  |
| 31                | HP20FP      | 55.0  | 88.0  |
| 31                | HP20Z       | 60.0  | 88.0  |
| 38                | HP24FP      | 62.0  | 94.0  |
| 38                | HP24Z       | 67.0  | 94.0  |
| 51                | HP32FP      | 78.1  | 99.1  |
| 51                | HP32Z       | 84.5  | 98.9  |
| 51                | HP32-920    | 83.7  | 98.9  |

B.S.P. MALE

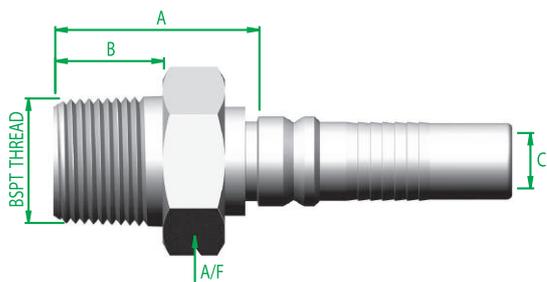


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 3/4"          | 12       | 19                | 3/4   | 12   | HP12MBM12   | 32  | 39.4  | 16.0  | 14.0  |
| 1"            | 16       | 25                | 1     | 16   | HP16MBM16   | 41  | 46.2  | 19.0  | 20.0  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | HP20MBM20   | 50  | 52.4  | 20.0  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | HP24MBM24   | 55  | 58.9  | 22.0  | 31.8  |
| 2"            | 32       | 51                | 2     | 32   | HP32MBM32   | 70  | 68.1  | 25.0  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length



## B.S.P. MALE TAPERED

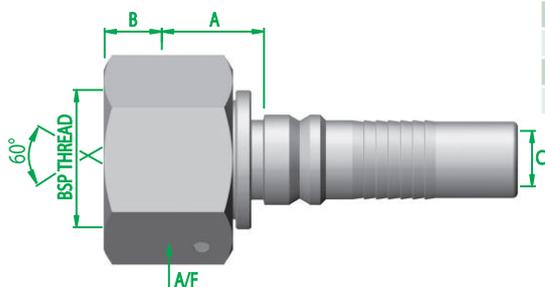


| B.S.P.T. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in    | dash |             |     |       |       |       |
| 3/4"            | 12       | 19                | 3/4   | 12   | HP12MBMT12  | 30  | 37.6  | 20.0  | 14.0  |
| 1"              | 16       | 25                | 1     | 16   | HP16MBMT16  | 36  | 42.5  | 22.0  | 20.0  |
| 1-1/4"          | 20       | 31                | 1-1/4 | 20   | HP20MBMT20  | 46  | 52.7  | 25.0  | 26.0  |
| 1-1/2"          | 24       | 38                | 1-1/2 | 24   | HP24MBMT24  | 50  | 53.4  | 25.0  | 31.8  |
| 2"              | 32       | 51                | 2     | 32   | HP32MBMT32  | 60  | 57.0  | 29.0  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## B.S.P. 'O' RING SEALING FEMALE

### WIRED ON NUT

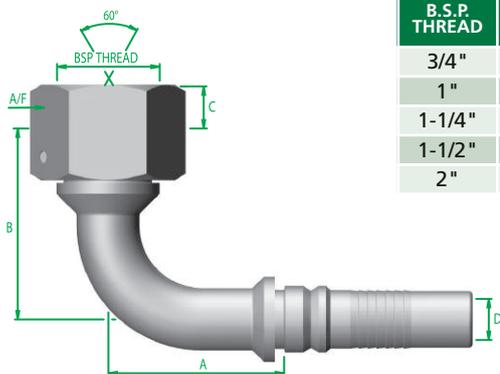


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 3/4"          | 12       | 19                | 3/4   | 12   | HP12WMBOF12 | 32  | 24.0  | 6.9   | 14.0  |
| 1"            | 16       | 25                | 1     | 16   | HP16WMBOF16 | 41  | 26.2  | 13.0  | 20.0  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | HP20WMBOF20 | 50  | 30.7  | 11.6  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | HP24WMBOF24 | 55  | 32.0  | 13.6  | 31.8  |
| 2"            | 32       | 51                | 2     | 32   | HP32WMBOF32 | 70  | 34.5  | 13.7  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## B.S.P. 'O' RING SEALING FEMALE 90° SWEEP ELBOW

### WIRED ON NUT

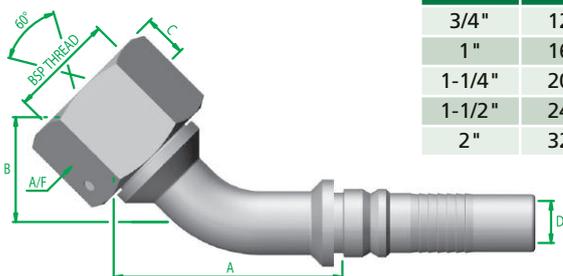


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |                 |     |       |       |       |       |
| 3/4"          | 12       | 19                | 3/4   | 12   | HPS12WMBOF90S12 | 32  | 51.1  | 64.0  | 6.9   | 14.0  |
| 1"            | 16       | 25                | 1     | 16   | HPS16WMBOF90S16 | 41  | 75.4  | 87.4  | 8.9   | 20.0  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | HPS20WMBOF90S20 | 50  | 84.8  | 98.3  | 10.2  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | HPS24WMBOF90S24 | 55  | 97.4  | 118.1 | 11.9  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | HPS32WMBOF90S32 | 70  | 142.0 | 153.7 | 13.9  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## B.S.P. 'O' RING SEALING FEMALE 45° SWEEP ELBOW

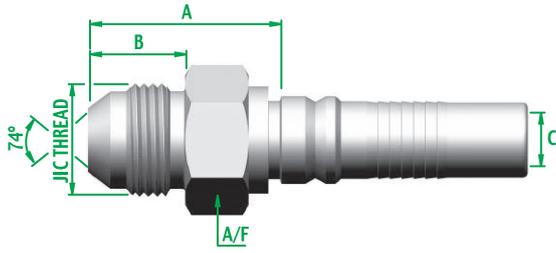
### WIRED ON NUT



| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER     | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|-----------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |                 |     |       |       |       |       |
| 3/4"          | 12       | 19                | 3/4   | 12   | HPS12WMBOF45S12 | 32  | 66.1  | 33.5  | 6.9   | 14.0  |
| 1"            | 16       | 25                | 1     | 16   | HPS16WMBOF45S16 | 41  | 95.3  | 43.7  | 8.9   | 20.0  |
| 1-1/4"        | 20       | 31                | 1-1/4 | 20   | HPS20WMBOF45S20 | 50  | 100.3 | 46.7  | 10.2  | 26.0  |
| 1-1/2"        | 24       | 38                | 1-1/2 | 24   | HPS24WMBOF45S24 | 55  | 117.3 | 57.4  | 11.9  | 32.0  |
| 2"            | 32       | 51                | 2     | 32   | HPS32WMBOF45S32 | 70  | 168.1 | 71.4  | 13.7  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. MALE

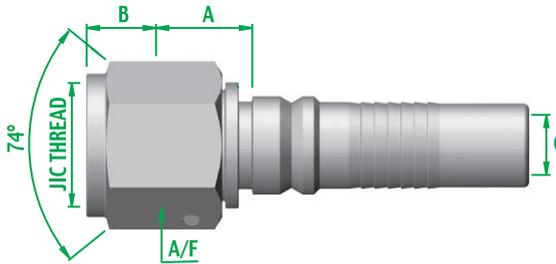


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | HP17JMM12   | 28  | 34.0  | 22.0  | 14.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | HP21JMM12   | 36  | 37.0  | 23.0  | 14.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | HP21JMM16   | 36  | 38.0  | 23.0  | 20.0  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | HP26JMM20   | 46  | 42.7  | 24.3  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | HP30JMM24   | 50  | 46.1  | 27.5  | 31.8  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | HP40JMM32   | 65  | 55.5  | 34.0  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE

WIRED ON NUT

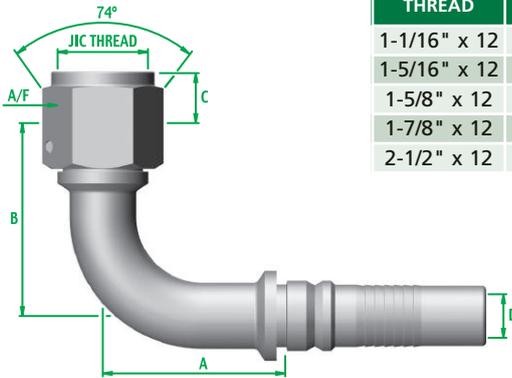


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in    | dash |             |     |       |       |       |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | HP17WJFM12  | 32  | 19.0  | 14.2  | 14.0  |
| 1-5/16" x 12  | 21       | 19                | 3/4   | 12   | HP21WJFM12  | 38  | 20.0  | 15.0  | 14.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | HP21WJFM16  | 38  | 21.0  | 15.0  | 20.0  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | HP26WJFM20  | 50  | 24.0  | 15.8  | 26.0  |
| 1-7/8" x 12   | 30       | 31                | 1-1/4 | 20   | HP30WJFM20  | 60  | 26.0  | 18.5  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | HP30WJFM24  | 60  | 26.5  | 18.5  | 31.8  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | HP40WJFM32  | 70  | 29.5  | 23.9  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE 90° SWEEP ELBOW

WIRED ON NUT

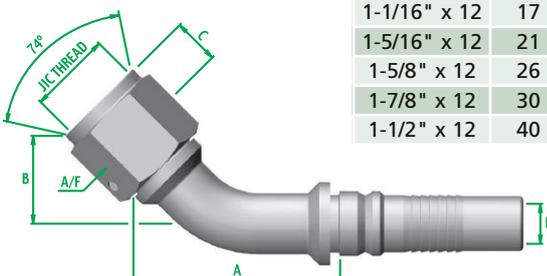


| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER    | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|----------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |                |     |       |       |       |       |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | HPS17WJFM90S12 | 32  | 51.1  | 65.0  | 14.2  | 14.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | HPS21WJFM90S16 | 41  | 75.4  | 87.1  | 15.0  | 20.0  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | HPS26WJFM90S20 | 50  | 84.8  | 97.3  | 15.8  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | HPS30WJFM90S24 | 60  | 97.0  | 115.8 | 18.5  | 31.8  |
| 2-1/2" x 12   | 40       | 51                | 2     | 32   | HPS40WJFM90S32 | 70  | 142.0 | 153.7 | 23.9  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

J.I.C. FEMALE 45° SWEEP ELBOW

WIRED ON NUT



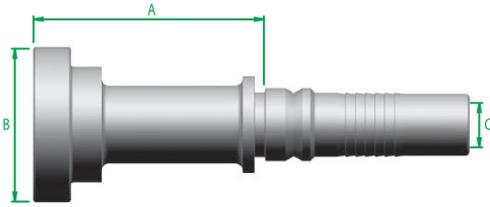
| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |       |      | PART NUMBER    | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|----------|-------------------|-------|------|----------------|-----|-------|-------|-------|-------|
|               |          | mm                | in    | dash |                |     |       |       |       |       |
| 1-1/16" x 12  | 17       | 19                | 3/4   | 12   | HPS17WJFM45S12 | 32  | 66.5  | 34.3  | 14.2  | 14.0  |
| 1-5/16" x 12  | 21       | 25                | 1     | 16   | HPS21WJFM45S16 | 41  | 94.2  | 43.4  | 15.0  | 20.0  |
| 1-5/8" x 12   | 26       | 31                | 1-1/4 | 20   | HPS26WJFM45S20 | 50  | 99.8  | 46.2  | 15.8  | 26.0  |
| 1-7/8" x 12   | 30       | 38                | 1-1/2 | 24   | HPS30WJFM45S24 | 60  | 115.8 | 55.6  | 18.5  | 32.0  |
| 1-1/2" x 12   | 40       | 51                | 2     | 32   | HPS40WJFM45S32 | 70  | 168.4 | 74.4  | 23.9  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length



## S.A.E. / I.S.O. FLANGE STRAIGHT INSERT

CODE 62

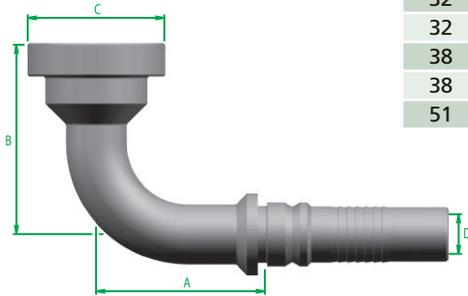


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER  | Dim A | Dim B | Dim C |
|---------------------|-------|------|-------------------|-------|------|--------------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |              |       |       |       |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | HP12SFH-6-12 | 50.0  | 41.3  | 14.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | HP16SFH-6-12 | 69.2  | 47.6  | 14.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | HP16SFH-6-16 | 57.5  | 47.6  | 20.0  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | HP20SFH-6-16 | 65.8  | 54.0  | 20.0  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | HP20SFH-6-20 | 67.0  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | HP24SFH-6-24 | 73.3  | 63.5  | 31.8  |
| 51                  | 2     | 32   | 38                | 1-1/2 | 24   | HP32SFH-6-24 | 93.2  | 79.4  | 31.8  |
| 51                  | 2     | 32   | 51                | 2     | 32   | HP32SFH-6-32 | 84.8  | 79.4  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## S.A.E. / I.S.O. FLANGE 90° SWEPT ELBOW

CODE 62

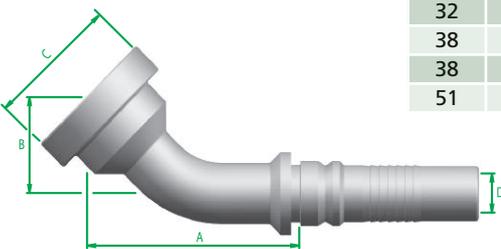


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER      | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|------------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                  |       |       |       |       |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | HPS12SFH90S-6-12 | 55.1  | 55.6  | 41.3  | 14.0  |
| 25                  | 1     | 16   | 19                | 3/4   | 12   | HPS16SFH90S-6-12 | 51.1  | 69.6  | 47.6  | 14.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | HPS16SFH90S-6-16 | 75.4  | 70.1  | 47.6  | 20.0  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | HPS20SFH90S-6-16 | 75.4  | 79.2  | 54.0  | 20.0  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | HPS20SFH90S-6-20 | 84.8  | 89.9  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | HPS24SFH90S-6-20 | 84.8  | 97.3  | 63.5  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | HPS24SFH90S-6-24 | 97.0  | 123.2 | 63.5  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | HPS32SFH90S-6-32 | 142.0 | 154.9 | 79.4  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## S.A.E. / I.S.O. FLANGE 45° SWEPT ELBOW

CODE 62

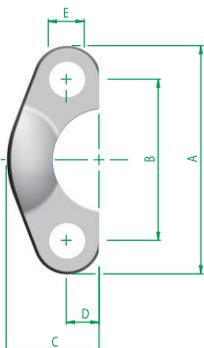


| NOMINAL FLANGE SIZE |       |      | NOMINAL HOSE BORE |       |      | PART NUMBER      | Dim A | Dim B | Dim C | Dim D |
|---------------------|-------|------|-------------------|-------|------|------------------|-------|-------|-------|-------|
| mm                  | in    | dash | mm                | in    | dash |                  |       |       |       |       |
| 19                  | 3/4   | 12   | 19                | 3/4   | 12   | HPS12SFH45S-6-12 | 63.0  | 26.2  | 41.3  | 14.0  |
| 25                  | 1     | 16   | 25                | 1     | 16   | HPS16SFH45S-6-16 | 87.1  | 34.5  | 47.6  | 20.0  |
| 32                  | 1-1/4 | 20   | 25                | 1     | 16   | HPS20SFH45S-6-16 | 90.9  | 39.9  | 54.0  | 20.0  |
| 32                  | 1-1/4 | 20   | 31                | 1-1/4 | 20   | HPS20SFH45S-6-20 | 100.6 | 47.0  | 54.0  | 26.0  |
| 38                  | 1-1/2 | 24   | 31                | 1-1/4 | 20   | HPS24SFH45S-6-20 | 107.4 | 47.0  | 63.5  | 26.0  |
| 38                  | 1-1/2 | 24   | 38                | 1-1/2 | 24   | HPS24SFH45S-6-24 | 121.4 | 61.0  | 63.5  | 32.0  |
| 51                  | 2     | 32   | 51                | 2     | 32   | HPS32SFH45S-6-32 | 168.9 | 74.4  | 79.4  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length

## S.A.E. / I.S.O. SPLIT FLANGE CLAMPS

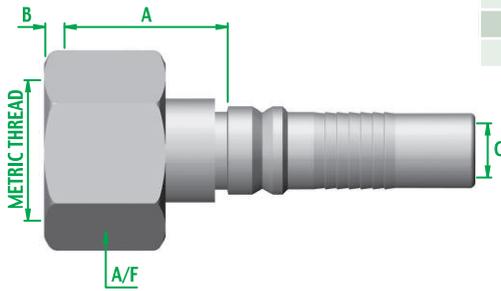
CODE 62



| NOMINAL FLANGE SIZE |       |      | PART NUMBER | Dim A | Dim B | Dim C | Dim D | Dim E |
|---------------------|-------|------|-------------|-------|-------|-------|-------|-------|
| mm                  | in    | dash |             |       |       |       |       |       |
| 13                  | 1/2   | 08   | RX08SFC-6   | 56.3  | 40.5  | 23.6  | 9.0   | 9.0   |
| 19                  | 3/4   | 12   | RX12SFC-6   | 71.4  | 50.8  | 30.0  | 12.0  | 11.0  |
| 25                  | 1     | 16   | RX16SFC-6   | 81.0  | 57.2  | 34.8  | 14.0  | 11.0  |
| 32                  | 1-1/4 | 20   | RX20SFC-6   | 95.2  | 66.7  | 38.6  | 16.0  | 12.0  |
| 38                  | 1-1/2 | 24   | RX24SFC-6   | 112.8 | 79.4  | 47.5  | 18.0  | 13.5  |
| 51                  | 2     | 32   | RX32SFC-6   | 133.3 | 96.8  | 56.9  | 22.0  | 13.5  |

**METRIC LOOSE NUT FEMALE DKO 'S'**

HEAVY-DUTY

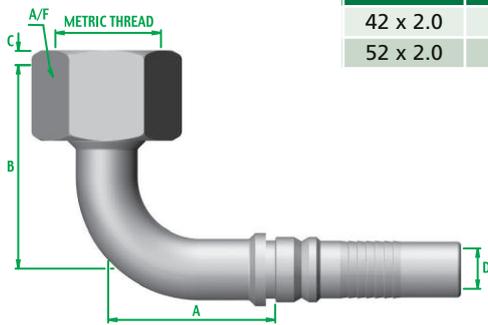


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER    | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-------|------|----------------|-----|-------|-------|-------|
|               |           | mm                | in    | dash |                |     |       |       |       |
| 36 x 2.0      | 25        | 19                | 3/4   | 12   | HP36LMSOF25-12 | 46  | 37.1  | 3.9   | 14.0  |
| 42 x 2.0      | 30        | 25                | 1     | 16   | HP42LMSOF30-16 | 50  | 40.1  | 5.5   | 20.0  |
| 52 x 2.0      | 38        | 31                | 1-1/4 | 20   | HP52LMSOF38-20 | 60  | 44.5  | 7.7   | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

**METRIC LOOSE NUT FEMALE DKO 'S' 90° SWEEP ELBOW**

HEAVY-DUTY

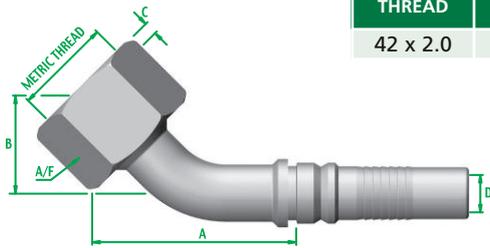


| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER        | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|-----------|-------------------|-------|------|--------------------|-----|-------|-------|-------|-------|
|               |           | mm                | in    | dash |                    |     |       |       |       |       |
| 42 x 2.0      | 30        | 25                | 1     | 16   | HPS42LMSOF30-90S16 | 50  | 75.4  | 75.9  | 5.5   | 20.0  |
| 52 x 2.0      | 38        | 31                | 1-1/4 | 20   | HPS52LMSOF38-90S20 | 60  | 84.8  | 97.3  | 7.7   | 26.0  |

NOTE: Dim A represents Hose Cut Off Length

**METRIC LOOSE NUT FEMALE DKO 'S' 45° SWEEP ELBOW**

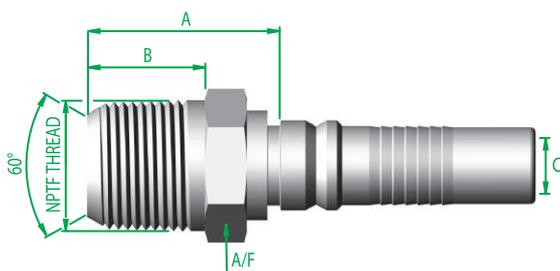
HEAVY-DUTY



| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |    |      | PART NUMBER        | A/F | Dim A | Dim B | Dim C | Dim D |
|---------------|-----------|-------------------|----|------|--------------------|-----|-------|-------|-------|-------|
|               |           | mm                | in | dash |                    |     |       |       |       |       |
| 42 x 2.0      | 30        | 25                | 1  | 16   | HPS42LMSOF30-45S16 | 50  | 90.4  | 39.6  | 5.5   | 20.0  |

NOTE: Dim A represents Hose Cut Off Length

**N.P.T.F. MALE**



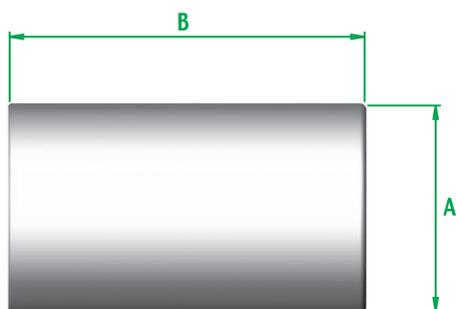
| N.P.T.F. THREAD | TUBE SIZE | NOMINAL HOSE BORE |       |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|-----------|-------------------|-------|------|-------------|-----|-------|-------|-------|
|                 |           | mm                | in    | dash |             |     |       |       |       |
| 3/4 x 14        | 12        | 19                | 3/4   | 12   | HP12NM12    | 27  | 40.8  | 19.3  | 14.0  |
| 1 x 11.5        | 16        | 25                | 1     | 16   | HP16NM16    | 36  | 46.3  | 23.8  | 20.0  |
| 1-1/4 x 11.5    | 20        | 31                | 1-1/4 | 20   | HP20NM20    | 46  | 56.7  | 24.6  | 26.0  |
| 1-1/2 x 11.5    | 24        | 38                | 1-1/2 | 24   | HP24NM24    | 50  | 53.8  | 25.4  | 31.8  |
| 2 x 11.5        | 32        | 51                | 2     | 32   | HP32NM32    | 65  | 60.3  | 26.2  | 42.0  |

NOTE: Dim A represents Hose Cut Off Length



**SWAGED FERRULE**

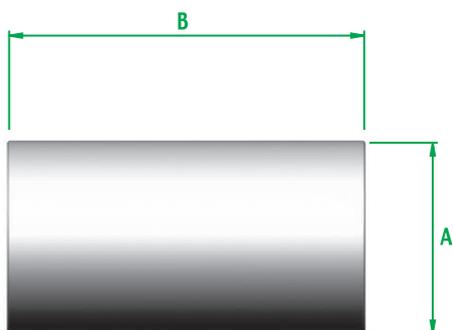
FOR USE ON VERY HIGH PRESSURE THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B |
|-------------------|-----|------|-------------|-------|-------|
| mm                | in  | dash |             |       |       |
| 6                 | 1/4 | 04   | ET04-352    | 19.9  | 38.1  |
| 10                | 3/8 | 06   | ET06-352    | 25.4  | 43.5  |

**SWAGED FERRULE**

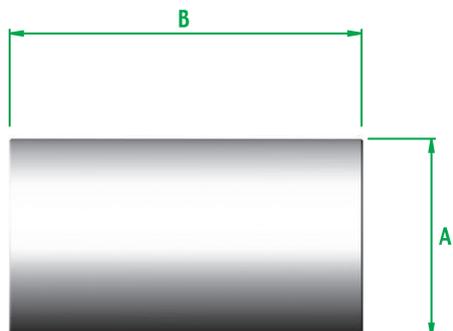
FOR USE ON VERY HIGH PRESSURE THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B |
|-------------------|-----|------|-------------|-------|-------|
| mm                | in  | dash |             |       |       |
| 6                 | 1/4 | 04   | ET04-852    | 20.6  | 38.1  |

**SWAGED FERRULE**

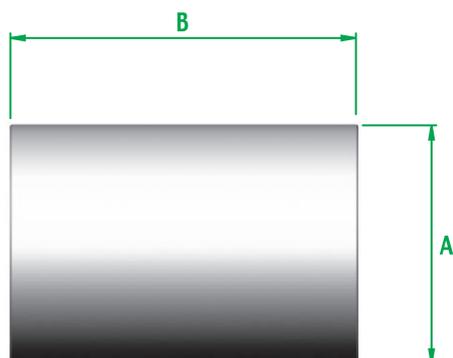
FOR USE ON VERY HIGH PRESSURE THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B |
|-------------------|-----|------|-------------|-------|-------|
| mm                | in  | dash |             |       |       |
| 10                | 3/8 | 06   | ET06-754    | 23.8  | 43.5  |
| 12                | 1/2 | 08   | ET08-754    | 28.6  | 50.4  |

**SWAGED FERRULE**

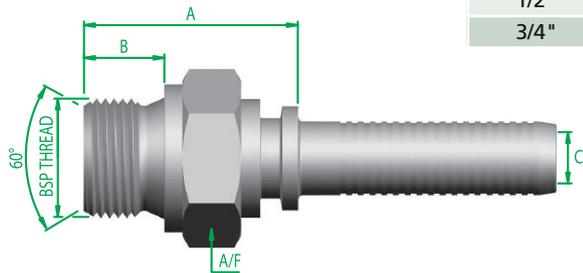
FOR USE ON VERY HIGH PRESSURE THERMOPLASTIC HOSE



| NOMINAL HOSE BORE |     |      | PART NUMBER | Dim A | Dim B |
|-------------------|-----|------|-------------|-------|-------|
| mm                | in  | dash |             |       |       |
| 12                | 1/2 | 08   | ET08-755    | 31.8  | 45.7  |
| 19                | 3/4 | 12   | ET12-755    | 39.7  | 60.0  |
| 25                | 1   | 16   | ET16-755    | 47.6  | 61.4  |



**B.S.P. MALE**

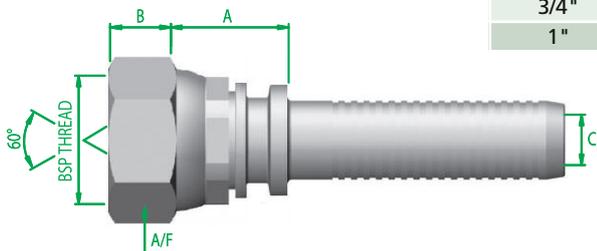


| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | ET04MBM04   | 19  | 29.1  | 11.0  | 3.8   |
| 3/8"          | 06       | 10                | 3/8 | 06   | ET06MBM06   | 22  | 31.6  | 12.0  | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | ET08MBM08   | 27  | 37.3  | 14.0  | 9.0   |
| 3/4"          | 10       | 19                | 3/4 | 12   | ET12MBM12   | 32  | 41.6  | 16.0  | 14.0  |

NOTE: Dim A represents Hose Cut Off Length

**B.S.P. FEMALE**

**CRIMPED NUT**



| B.S.P. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/4"          | 04       | 6                 | 1/4 | 04   | ET04MBF04   | 19  | 18.9  | 5.2   | 3.8   |
| 3/8"          | 06       | 6                 | 1/4 | 04   | ET06MBF04   | 22  | 20.3  | 6.0   | 3.8   |
| 3/8"          | 06       | 10                | 3/8 | 06   | ET06MBF06   | 22  | 20.6  | 6.0   | 7.0   |
| 1/2"          | 08       | 12                | 1/2 | 08   | ET08MBF08   | 27  | 23.7  | 6.5   | 9.0   |
| 3/4"          | 12       | 19                | 3/4 | 12   | ET12MBF12   | 32  | 25.0  | 9.0   | 14.0  |
| 1"            | 16       | 25                | 1   | 16   | ET16MBF16   | 41  | 29.4  | 8.9   | 20.0  |

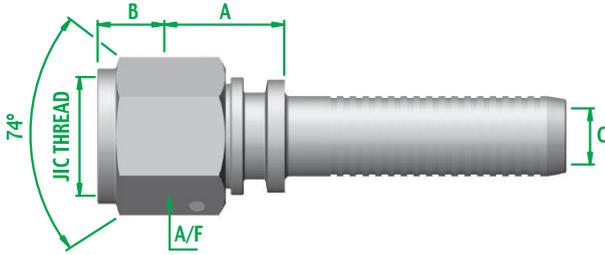
NOTE: Dim A represents Hose Cut Off Length

## J.I.C. FEMALE

## WIRED ON NUT

| J.I.C. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               |          | mm                | in  | dash |             |     |       |       |       |
| 1/2" x 20     | 08       | 6                 | 1/4 | 04   | ET08WJF04   | 19  | 17.3  | 9.4   | 3.8   |
| 9/16" x 18    | 09       | 6                 | 1/4 | 04   | ET09WJF04   | 19  | 19.0  | 9.4   | 3.8   |

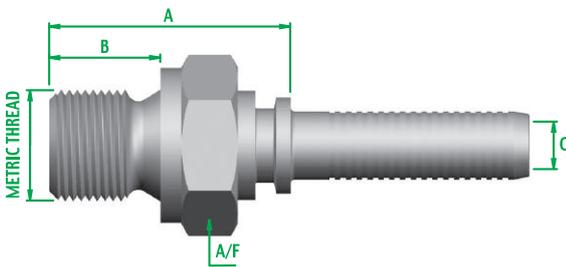
NOTE: Dim A represents Hose Cut Off Length



## METRIC MALE

| METRIC THREAD | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|---------------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|               | mm                | in  | dash |             |     |       |       |       |
| 12 x 1.5      | 6                 | 1/4 | 04   | ET12MMW04   | 17  | 29.1  | 12.0  | 3.8   |

NOTE: Dim A represents Hose Cut Off Length

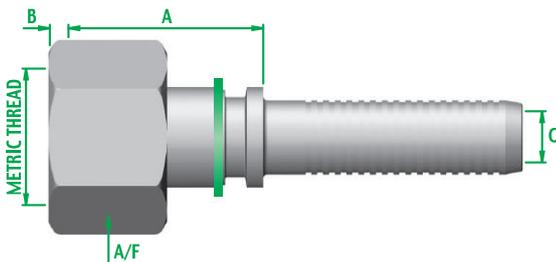


## METRIC LOOSE NUT FEMALE - DKO 'S'

## HEAVY-DUTY

| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER    | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-----|------|----------------|-----|-------|-------|-------|
|               |           | mm                | in  | dash |                |     |       |       |       |
| 16 x 1.5      | 8         | 6                 | 1/4 | 04   | ET16LMSOF08-04 | 19  | 27.4  | 2.8   | 3.8   |
| 18 x 1.5      | 10        | 6                 | 1/4 | 04   | ET18LMSOF10-04 | 22  | 28.4  | 3.7   | 3.8   |

NOTE: Dim A represents Hose Cut Off Length

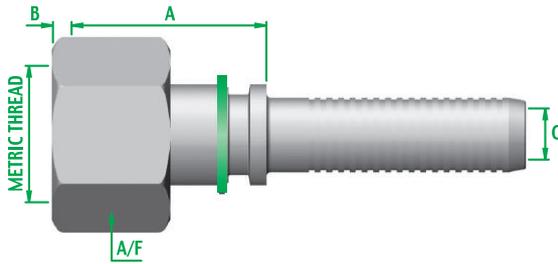


## METRIC LOOSE NUT FEMALE - DKO 'L'

LIGHT-DUTY

| METRIC THREAD | TUBE SIZE | NOMINAL HOSE BORE |     |      | PART NUMBER    | A/F | Dim A | Dim B | Dim C |
|---------------|-----------|-------------------|-----|------|----------------|-----|-------|-------|-------|
|               |           | mm                | in  | dash |                |     |       |       |       |
| 14 x 1.5      | 8         | 6                 | 1/4 | 04   | ET14LMSOF08-04 | 19  | 23.1  | 3.8   | 3.8   |

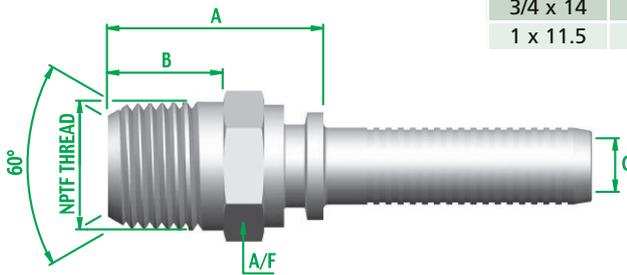
NOTE: Dim A represents Hose Cut Off Length



## N.P.T.F. MALE

| N.P.T.F. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in  | dash |             |     |       |       |       |
| 1/8 x 27        | 02       | 6                 | 1/4 | 04   | ET02NM04    | 17  | 28.6  | 9.5   | 3.8   |
| 1/4 x 18        | 04       | 6                 | 1/4 | 04   | ET04NM04    | 17  | 29.6  | 14.5  | 3.8   |
| 3/8 x 18        | 06       | 6                 | 1/4 | 04   | ET06NM04    | 19  | 29.6  | 14.5  | 7.0   |
| 3/8 x 18        | 06       | 10                | 3/8 | 06   | ET06NM06    | 19  | 33.8  | 14.5  | 7.0   |
| 1/2 x 14        | 08       | 12                | 1/2 | 08   | ET08NM08    | 22  | 41.4  | 19.3  | 9.0   |
| 3/4 x 14        | 12       | 19                | 3/4 | 12   | ET12NM12    | 27  | 43.0  | 19.3  | 14.0  |
| 1 x 11.5        | 16       | 25                | 1   | 16   | ET16NM16    | 36  | 48.9  | 23.8  | 20.0  |

NOTE: Dim A represents Hose Cut Off Length

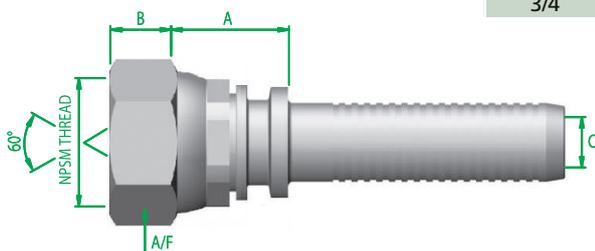


## N.P.S.M. CRIMPED NUT FEMALE

AIRLESS PAINT SPRAY

| N.P.S.M. THREAD | DASH No. | NOMINAL HOSE BORE |     |      | PART NUMBER | A/F | Dim A | Dim B | Dim C |
|-----------------|----------|-------------------|-----|------|-------------|-----|-------|-------|-------|
|                 |          | mm                | in  | dash |             |     |       |       |       |
| 1/4             | 04       | 8                 | 1/4 | 04   | ET04NSF04   | 19  | 18.9  | 4.2   | 3.8   |
| 3/8             | 06       | 10                | 3/8 | 06   | ET06NSF06   | 22  | 20.6  | 5.3   | 7.0   |
| 1/2             | 08       | 12                | 1/2 | 08   | ET08NSF08   | 27  | 23.7  | 6.4   | 9.0   |
| 3/4             | 12       | 19                | 3/4 | 12   | ET12NSF12   | 32  | 25.0  | 9.0   | 14.0  |

NOTE: Dim A represents Hose Cut Off Length



EURO  
POWER

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POWER

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power