



# FITTINGS







































































































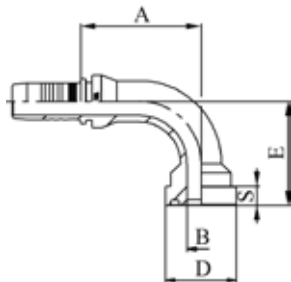




## ORIGINAL EQUIPMENT CONNECTIONS

### M23991

#### 90° SUPERCAT FLANGE

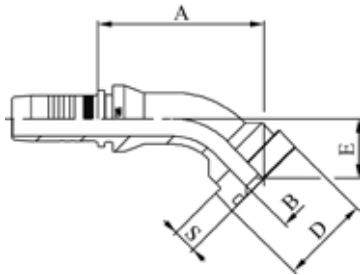


| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |      |      |      |      |  |  |
|--------------|-----------|------|--------|--------|--|------------------|------|------|------|------|--|--|
|              | DN        | Dash | inch   |        |  | Inch             | B    | A    | D    | E    |  |  |
| M23991-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 15               | 64,5 | 41,5 | 64,5 | 14,3 |  |  |
| M23991-16-16 | 25        | - 16 | 1"     | 1"     |  | 19,8             | 77,5 | 47,7 | 76,5 | 14,3 |  |  |
| M23991-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 75,5 | 54   | 80,5 | 14,3 |  |  |
| M23991-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 85,5 | 54   | 87   | 14,3 |  |  |
| M23991-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 85,5 | 63,7 | 93   | 14,3 |  |  |

## ORIGINAL EQUIPMENT CONNECTIONS

### M23941

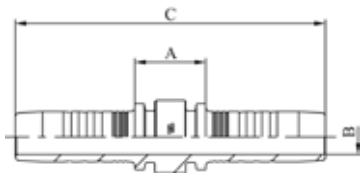
#### 45° SUPERCAT FLANGE



| PART. REF.   | HOSE BORE |      | Flange |        | DIMENSIONS<br>mm |      |      |      |      |  |  |
|--------------|-----------|------|--------|--------|------------------|------|------|------|------|--|--|
|              | DN        | Dash | inch   | Inch   | B                | A    | D    | E    | S    |  |  |
| M23941-12-12 | 19        | - 12 | 3/4"   | 3/4"   | 15               | 77   | 41,5 | 32   | 14,3 |  |  |
| M23941-16-16 | 25        | - 16 | 1"     | 1"     | 19,8             | 89,5 | 47,7 | 36,5 | 14,3 |  |  |
| M23941-16-20 | 25        | - 16 | 1"     | 1"     | 26               | 92,5 | 54   | 40,5 | 14,3 |  |  |
| M23941-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" | 26               | 99   | 54   | 41,5 | 14,3 |  |  |
| M23941-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" | 32               | 119  | 63,6 | 45,5 | 14,3 |  |  |

## M10050

### DOUBLE CONNECTOR

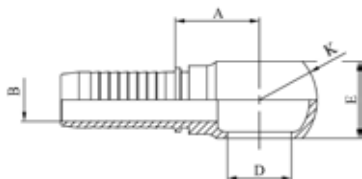


| PART. REF.   | HOSE BORE |      |        | DIMENSIONS<br>mm |  |  |      |      |       |  |  |  |  |  |  |  |  |  |
|--------------|-----------|------|--------|------------------|--|--|------|------|-------|--|--|--|--|--|--|--|--|--|
|              | DN        | Dash | inch   |                  |  |  |      |      |       |  |  |  |  |  |  |  |  |  |
| M10050-03-03 | 5         | - 3  | 3/16"  |                  |  |  | 3    | 15,5 | 58,2  |  |  |  |  |  |  |  |  |  |
| M10050-04-04 | 6         | - 4  | 1/4"   |                  |  |  | 4    | 14   | 69    |  |  |  |  |  |  |  |  |  |
| M10050-05-05 | 8         | - 5  | 5/16"  |                  |  |  | 5,5  | 14   | 70    |  |  |  |  |  |  |  |  |  |
| M10050-06-06 | 10        | - 6  | 3/8"   |                  |  |  | 7    | 14,5 | 73,5  |  |  |  |  |  |  |  |  |  |
| M10050-08-08 | 12        | - 8  | 1/2"   |                  |  |  | 9,3  | 15,5 | 77,9  |  |  |  |  |  |  |  |  |  |
| M10050-10-10 | 16        | - 10 | 5/8"   |                  |  |  | 12,5 | 15,5 | 84    |  |  |  |  |  |  |  |  |  |
| M10050-12-12 | 19        | - 12 | 3/4"   |                  |  |  | 15   | 18,5 | 91,5  |  |  |  |  |  |  |  |  |  |
| M10050-16-16 | 25        | - 16 | 1"     |                  |  |  | 19,8 | 22,5 | 119   |  |  |  |  |  |  |  |  |  |
| M10050-20-20 | 31        | - 20 | 1.1/4" |                  |  |  | 26   | 23   | 128,1 |  |  |  |  |  |  |  |  |  |
| M10050-24-24 | 38        | - 24 | 1.1/2" |                  |  |  | 32   | 23,5 | 147,5 |  |  |  |  |  |  |  |  |  |

## BANJO CONNECTIONS

### O20910

METRIC BANJO - DIN 7642

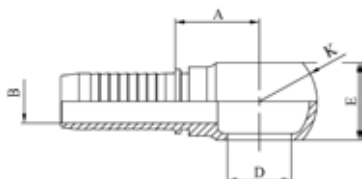


| PART. REF.   | HOSE BORE |      |       | Thread   | DIMENSIONS<br>mm |      |      |    |    |    |  |  |
|--------------|-----------|------|-------|----------|------------------|------|------|----|----|----|--|--|
|              | DN        | Dash | inch  |          | T                | B    | A    | D  | E  | K  |  |  |
| O20910-04-12 | 6         | - 4  | 1/4"  | M 12x1,5 |                  | 4,4  | 22,5 | 12 | 12 | 20 |  |  |
| O20910-04-14 | 6         | - 4  | 1/4"  | M 14x1,5 |                  | 4,4  | 23,5 | 14 | 14 | 24 |  |  |
| O20910-05-14 | 8         | - 5  | 5/16" | M 14x1,5 |                  | 5,6  | 23,5 | 14 | 14 | 24 |  |  |
| O20910-06-14 | 10        | - 6  | 3/8"  | M 14x1,5 |                  | 7,1  | 25   | 14 | 14 | 24 |  |  |
| O20910-06-16 | 10        | - 6  | 3/8"  | M 16x1,5 |                  | 7,1  | 25   | 16 | 16 | 28 |  |  |
| O20910-06-18 | 10        | - 6  | 3/8"  | M 18x1,5 |                  | 7,1  | 27   | 18 | 20 | 32 |  |  |
| O20910-08-18 | 12        | - 8  | 1/2"  | M 18x1,5 |                  | 9,8  | 28   | 18 | 20 | 32 |  |  |
| O20910-08-22 | 12        | - 8  | 1/2"  | M 22x1,5 |                  | 9,8  | 31   | 22 | 25 | 39 |  |  |
| O20910-10-22 | 16        | - 10 | 5/8"  | M 22x1,5 |                  | 12,7 | 31   | 22 | 25 | 39 |  |  |
| O20910-12-26 | 19        | - 12 | 3/4"  | M 26x1,5 |                  | 15,5 | 34,5 | 26 | 30 | 46 |  |  |

## BANJO CONNECTIONS

### O20310

BSP BANJO

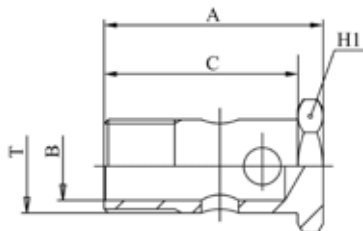


| PART. REF.   | HOSE BORE |      |       | Thread    | DIMENSIONS<br>mm |      |      |      |    |    |  |  |
|--------------|-----------|------|-------|-----------|------------------|------|------|------|----|----|--|--|
|              | DN        | Dash | inch  |           | T                | B    | A    | D    | E  | K  |  |  |
| O20310-04-04 | 6         | - 4  | 1/4"  | 1/4" - 19 |                  | 4,4  | 22   | 13,2 | 15 | 24 |  |  |
| O20310-04-06 | 6         | - 4  | 1/4"  | 3/8" - 19 |                  | 4,4  | 23,5 | 16,7 | 18 | 28 |  |  |
| O20310-05-04 | 8         | - 5  | 5/16" | 1/4" - 19 |                  | 5    | 23   | 13,2 | 14 | 24 |  |  |
| O20310-05-06 | 8         | - 5  | 5/16" | 3/8" - 19 |                  | 5,6  | 23   | 16,7 | 20 | 29 |  |  |
| O20310-06-06 | 10        | - 6  | 3/8"  | 3/8" - 19 |                  | 7    | 24,5 | 16,7 | 20 | 29 |  |  |
| O20310-06-08 | 10        | - 6  | 3/8"  | 1/2" - 19 |                  | 7,1  | 27   | 21   | 25 | 38 |  |  |
| O20310-08-08 | 12        | - 8  | 1/2"  | 1/2" - 14 |                  | 9,8  | 27,5 | 21   | 25 | 38 |  |  |
| O20310-10-10 | 16        | - 10 | 5/8"  | 5/8" - 14 |                  | 12,7 | 29,5 | 23   | 27 | 40 |  |  |
| O20310-12-12 | 19        | - 12 | 3/4"  | 3/4" - 14 |                  | 15,5 | 36,5 | 26,5 | 31 | 48 |  |  |
| O20310-16-16 | 25        | - 16 | 1"    | 1" - 11   |                  | 20,5 | 40,5 | 33,3 | 42 | 60 |  |  |

BOLT

**O80810**

METRIC BOLT - DIN 7643

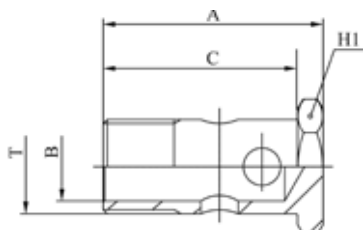


| PART. REF. | HOSE BORE |      |      | Thread   | DIMENSIONS<br>mm |    |    |    |    |  |  |  |
|------------|-----------|------|------|----------|------------------|----|----|----|----|--|--|--|
|            | DN        | Dash | inch |          | T                | B  | A  | C  | H1 |  |  |  |
| O80810-12  |           |      |      | M 12x1,5 |                  | 7  | 29 | 24 | 17 |  |  |  |
| O80810-14  |           |      |      | M 14x1,5 |                  | 9  | 31 | 26 | 19 |  |  |  |
| O80810-16  |           |      |      | M 16x1,5 |                  | 11 | 33 | 28 | 22 |  |  |  |
| O80810-18  |           |      |      | M 18x1,5 |                  | 13 | 37 | 32 | 24 |  |  |  |
| O80810-22  |           |      |      | M 22x1,5 |                  | 16 | 45 | 39 | 27 |  |  |  |
| O80810-26  |           |      |      | M 26x1,5 |                  | 20 | 51 | 45 | 32 |  |  |  |

BOLT

**O80210**

BSP BOLT



| PART. REF. | HOSE BORE |      |      | Thread    | DIMENSIONS<br>mm |    |      |      |    |  |  |  |
|------------|-----------|------|------|-----------|------------------|----|------|------|----|--|--|--|
|            | DN        | Dash | inch |           | T                | B  | A    | C    | H1 |  |  |  |
| O80210-04  |           |      |      | 1/4" - 19 |                  | 6  | 34,5 | 28,5 | 17 |  |  |  |
| O80210-06  |           |      |      | 3/8" - 19 |                  | 9  | 45,5 | 38,5 | 22 |  |  |  |
| O80210-08  |           |      |      | 1/2" - 14 |                  | 13 | 52   | 44   | 27 |  |  |  |
| O80210-10  |           |      |      | 5/8" - 14 |                  | 15 | 56,5 | 48,5 | 30 |  |  |  |
| O80210-12  |           |      |      | 3/4" - 14 |                  | 18 | 64   | 54   | 32 |  |  |  |
| O80210-16  |           |      |      | 1" - 11   |                  | 24 | 77,5 | 68,5 | 41 |  |  |  |

FITTINGS F 2-82

# **manuli**<sup>®</sup> HYDRAULICS



# INTERLOCK PLUS

| FITTING CODE     | SECTION | PAGE |
|------------------|---------|------|
| JO29             | 3       | 31   |
| M01500           | 3       | 1    |
| M01600           | 3       | 1    |
| M01800-M01810    | 3       | 2    |
| M30050           | 3       | 30   |
| M30510           | 3       | 2    |
| M31210           | 3       | 18   |
| M32410           | 3       | 6    |
| M32510           | 3       | 4    |
| M32810           | 3       | 11   |
| M33010           | 3       | 11   |
| M40812           | 3       | 3    |
| M40842           | 3       | 4    |
| M40892           | 3       | 3    |
| M41243 LONG DROP | 3       | 20   |
| M41293 LONG DROP | 3       | 20   |
| M41612-M41613    | 3       | 18   |
| M41642-M41643    | 3       | 19   |
| M41692-M41693    | 3       | 19   |
| M42411           | 3       | 7    |
| M42412           | 3       | 7    |
| M42441           | 3       | 9    |
| M42442           | 3       | 10   |
| M42443           | 3       | 10   |
| M42491           | 3       | 8    |
| M42492           | 3       | 8    |
| M42493           | 3       | 9    |
| M42512           | 3       | 5    |
| M42542           | 3       | 6    |
| M42592           | 3       | 5    |
| M43310           | 3       | 12   |

| FITTING CODE     | SECTION | PAGE |
|------------------|---------|------|
| M43320           | 3       | 12   |
| M43330           | 3       | 13   |
| M43340           | 3       | 13   |
| M43390           | 3       | 14   |
| M43610           | 3       | 15   |
| M43630           | 3       | 16   |
| M43640           | 3       | 16   |
| M43660           | 3       | 17   |
| M43690           | 3       | 17   |
| M43710           | 3       | 21   |
| M43740           | 3       | 21   |
| M43790           | 3       | 21   |
| M43910           | 3       | 22   |
| M43910CT         | 3       | 22   |
| M43920           | 3       | 23   |
| M43930           | 3       | 23   |
| M43940           | 3       | 24   |
| M43940CT         | 3       | 24   |
| M43960           | 3       | 25   |
| M43970           | 3       | 25   |
| M43990           | 3       | 26   |
| M43990 LONG DROP | 3       | 27   |
| M43990CT         | 3       | 26   |
| M44492 LONG DROP | 3       | 10   |
| M48410           | 3       | 27   |
| M48490           | 3       | 28   |
| M48510           | 3       | 28   |
| M48540           | 3       | 29   |
| M48590           | 3       | 29   |
| M49510WL         | 3       | 30   |

## INTERLOCK PLUS

| DN   | 5     | 6    | 8     | 10   | 12   | 16   | 19   | 25  | 31     | 38     | 51  | 60     | 63     | 76  | 89     | 102 |
|------|-------|------|-------|------|------|------|------|-----|--------|--------|-----|--------|--------|-----|--------|-----|
| Inch | 3/16" | 1/4" | 5/16" | 3/8" | 1/2" | 5/8" | 3/4" | 1"  | 1 1/4" | 1 1/2" | 2"  | 2 3/8" | 2 1/2" | 3"  | 3 1/2" | 4"  |
| Size | -03   | -04  | -05   | -06  | -08  | -10  | -12  | -16 | -20    | -24    | -32 | -38    | -40    | -48 | -56    | -64 |

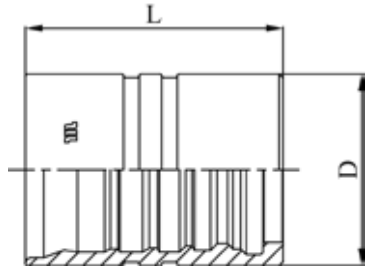
### FERRULES

|                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| M01500          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M01600          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| M01800 / M01810 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

### FITTINGS

|                                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| BSP                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE (JIC)                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE (ORFS)                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE (NPTF-NPSM)                |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE FLANGE CODE 61             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAE FLANGE CODE 62             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DIN METRIC 24° CONE HEAVY TYPE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ORIGINAL EQUIPMENT CONNECTIONS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| XTRAFLLANGE                    |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

FITTINGS F-311

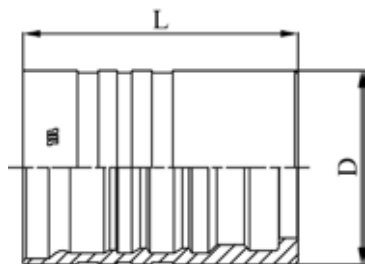


FERRULE

**M01500**

DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (4 PLY)

| PART. REF. | HOSE BORE |      |        | DIMENSIONS<br>mm |  |      |      |  |  |  |  |
|------------|-----------|------|--------|------------------|--|------|------|--|--|--|--|
|            | DN        | Dash | inch   |                  |  | D    | L    |  |  |  |  |
| M01500-10  | 16        | - 10 | 5/8"   |                  |  | 35   | 40,9 |  |  |  |  |
| M01500-12  | 19        | - 12 | 3/4"   |                  |  | 40   | 51,4 |  |  |  |  |
| M01500-16  | 25        | - 16 | 1"     |                  |  | 48   | 64,5 |  |  |  |  |
| M01500-20  | 31        | - 20 | 1.1/4" |                  |  | 57   | 84   |  |  |  |  |
| M01500-24  | 38        | - 24 | 1.1/2" |                  |  | 64,3 | 94   |  |  |  |  |
| M01500-32  | 51        | - 32 | 2"     |                  |  | 83,5 | 107  |  |  |  |  |
| M01500-40  | 63        | - 40 | 2.1/2" |                  |  | 100  | 135  |  |  |  |  |
| M01500-48  | 76        | - 48 | 3"     |                  |  | 107  | 125  |  |  |  |  |



FERRULE

**M01600**

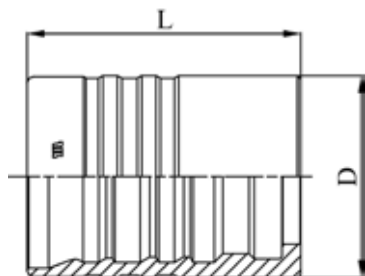
DOUBLE SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (6 PLY)

| PART. REF. | HOSE BORE |      |        | DIMENSIONS<br>mm |  |    |    |  |  |  |  |
|------------|-----------|------|--------|------------------|--|----|----|--|--|--|--|
|            | DN        | Dash | inch   |                  |  | D  | L  |  |  |  |  |
| M01600-20  | 31        | - 20 | 1.1/4" |                  |  | 60 | 85 |  |  |  |  |
| M01600-24  | 38        | - 24 | 1.1/2" |                  |  | 69 | 96 |  |  |  |  |

## FERRULE

### M01800/M01810

DOUBLE SKIVE FERRULE FOR EXTRA DUTY SPIRAL HOSES (6 PLY)



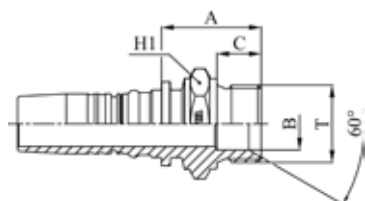
FITTINGS F 3-2

| PART. REF. | HOSE BORE |      |        | DIMENSIONS mm |  |       |      |  |  |  |  |
|------------|-----------|------|--------|---------------|--|-------|------|--|--|--|--|
|            | DN        | Dash | inch   |               |  | D     | L    |  |  |  |  |
| M01800-20  | 31        | - 20 | 1.1/4" |               |  | 65    | 88,2 |  |  |  |  |
| M01800-32  | 51        | - 32 | 2"     |               |  | 86,5  | 108  |  |  |  |  |
| M01810-40  | 63        | - 40 | 2.1/2" |               |  | 103   | 135  |  |  |  |  |
| M01810-48  | 76        | - 48 | 3"     |               |  | 113,5 | 125  |  |  |  |  |

## BS STANDARD CONNECTIONS

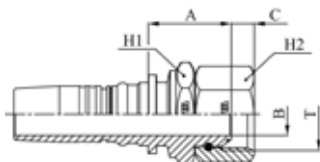
### M30510

BSP MALE PARALLEL 60° CONE SEAT - BS5200 / ISO 8434-6



| PART. REF.   | HOSE BORE |      |        | Thread      | DIMENSIONS mm |      |    |    |    |  |
|--------------|-----------|------|--------|-------------|---------------|------|----|----|----|--|
|              | DN        | Dash | inch   |             | T             | B    | A  | C  | H1 |  |
| M30510-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   | 17            | 37   | 16 | 32 |    |  |
| M30510-12-16 | 19        | - 12 | 3/4"   | 1" - 11     | 22,5          | 43   | 19 | 41 |    |  |
| M30510-16-16 | 25        | - 16 | 1"     | 1" - 11     | 22,5          | 43   | 19 | 41 |    |  |
| M30510-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 | 28,5          | 48   | 20 | 50 |    |  |
| M30510-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 | 28,5          | 50,5 | 20 | 50 |    |  |
| M30510-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 | 33,5          | 54,5 | 22 | 55 |    |  |
| M30510-32-32 | 51        | - 32 | 2"     | 2" - 11     | 42            | 58   | 25 | 70 |    |  |

## BS STANDARD CONNECTIONS

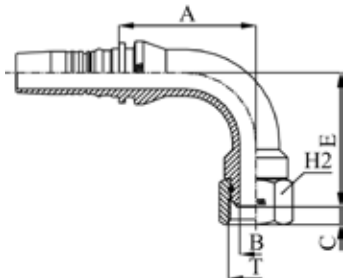


### M40812

**BSP O-RING FEMALE 60° CONE - BS5200 / ISO 12151-6 (THRUST-WIRE NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread      | DIMENSIONS<br>mm |      |      |    |    |    |  |  |
|--------------|-----------|------|--------|-------------|------------------|------|------|----|----|----|--|--|
|              | DN        | Dash | inch   |             | T                | B    | A    | C  | H1 | H2 |  |  |
| M40812-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   | 14,5             | 39   | 8,5  | 32 | 32 |    |  |  |
| M40812-12-16 | 19        | - 12 | 3/4"   | 1" - 11     | 19               | 36,5 | 10,6 | 32 | 41 |    |  |  |
| M40812-16-12 | 25        | - 16 | 1"     | 3/4" - 14   | 15               | 35   | 8,5  | 41 | 32 |    |  |  |
| M40812-16-16 | 25        | - 16 | 1"     | 1" - 11     | 19,5             | 44,5 | 10,6 | 41 | 41 |    |  |  |
| M40812-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 | 26,1             | 41   | 10,5 | 41 | 50 |    |  |  |
| M40812-20-16 | 31        | - 20 | 1.1/4" | 1" - 11     | 19               | 44,5 | 10,6 | 50 | 41 |    |  |  |
| M40812-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 | 26,1             | 52,5 | 10,5 | 50 | 50 |    |  |  |
| M40812-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" - 11 | 32,1             | 46   | 12,5 | 50 | 60 |    |  |  |
| M40812-24-20 | 38        | - 24 | 1.1/2" | 1.1/4" - 11 | 26,1             | 48,5 | 10,5 | 60 | 50 |    |  |  |
| M40812-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 | 32,1             | 51,5 | 12,5 | 60 | 60 |    |  |  |
| M40812-32-32 | 51        | - 32 | 2"     | 2" - 11     | 42               | 51,5 | 16,1 | 70 | 70 |    |  |  |

## BS STANDARD CONNECTIONS



### M40892

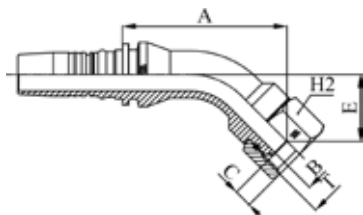
**90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE BS5200 / ISO 12151-6 (THRUST-WIRE NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread      | DIMENSIONS<br>mm |       |      |       |    |    |  |  |
|--------------|-----------|------|--------|-------------|------------------|-------|------|-------|----|----|--|--|
|              | DN        | Dash | inch   |             | T                | B     | A    | C     | E  | H2 |  |  |
| M40892-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   | 14,5             | 72,5  | 8,5  | 70    | 32 |    |  |  |
| M40892-12-16 | 19        | - 12 | 3/4"   | 1" - 11     | 19               | 72,5  | 10,6 | 71    | 41 |    |  |  |
| M40892-16-16 | 25        | - 16 | 1"     | 1" - 11     | 19,5             | 82    | 10,6 | 80,5  | 41 |    |  |  |
| M40892-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 | 26,1             | 95    | 10,5 | 78,5  | 50 |    |  |  |
| M40892-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 | 26,1             | 98,5  | 10,5 | 98    | 50 |    |  |  |
| M40892-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" - 11 | 32,1             | 98,5  | 12,5 | 84,5  | 60 |    |  |  |
| M40892-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 | 32,1             | 111,5 | 12,5 | 109   | 60 |    |  |  |
| M40892-32-32 | 51        | - 32 | 2"     | 2" - 11     | 42               | 143   | 16,1 | 140,5 | 70 |    |  |  |

## BS STANDARD CONNECTIONS

### M40842

45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE BS5200 / ISO 12151-6 (THRUST-WIRE NUT)

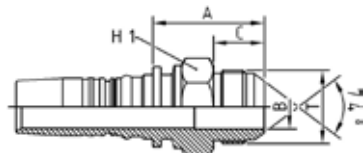


| PART. REF.   | HOSE BORE |      |        | Thread      |  | DIMENSIONS mm |       |      |      |    |    |  |
|--------------|-----------|------|--------|-------------|--|---------------|-------|------|------|----|----|--|
|              | DN        | Dash | inch   |             |  | T             | B     | A    | C    | E  | H2 |  |
| M40842-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   |  | 14,5          | 88    | 8,5  | 35   | 32 |    |  |
| M40842-12-16 | 19        | - 12 | 3/4"   | 1" - 11     |  | 19            | 89,5  | 10,6 | 36,5 | 41 |    |  |
| M40842-16-12 | 25        | - 16 | 1"     | 3/4" - 14   |  | 15            | 105,5 | 8,5  | 36   | 32 |    |  |
| M40842-16-16 | 25        | - 16 | 1"     | 1" - 11     |  | 19,5          | 97    | 10,6 | 40   | 41 |    |  |
| M40842-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 |  | 26,1          | 108,5 | 10,5 | 38   | 50 |    |  |
| M40842-20-16 | 31        | - 20 | 1.1/4" | 1" - 11     |  | 19            | 118   | 10,6 | 47,5 | 41 |    |  |
| M40842-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 |  | 26,1          | 120   | 10,5 | 49,5 | 50 |    |  |
| M40842-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" - 11 |  | 32,1          | 114,5 | 12,5 | 40   | 60 |    |  |
| M40842-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 |  | 32,1          | 126,5 | 12,5 | 50   | 60 |    |  |
| M40842-32-32 | 51        | - 32 | 2"     | 2" - 11     |  | 42            | 162,5 | 16,1 | 66,5 | 70 |    |  |

## SAE STANDARD CONNECTIONS

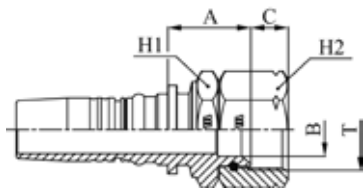
### M32510

JIC MALE 37° CONE - SAE J516 / ISO 12151-5



| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS mm |      |      |    |    |  |
|--------------|-----------|------|--------|--------------|--|---------------|------|------|----|----|--|
|              | DN        | Dash | inch   |              |  | T             | B    | A    | C  | H1 |  |
| M32510-10-10 | 16        | - 10 | 5/8"   | 7/8" - 14    |  | 12            | 41   | 19,5 | 27 |    |  |
| M32510-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 15            | 45,5 | 22   | 32 |    |  |
| M32510-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 20            | 50,5 | 23   | 38 |    |  |
| M32510-16-20 | 25        | - 16 | 1"     | 1.5/8" - 12  |  | 26            | 57   | 24,3 | 42 |    |  |
| M32510-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1          | 66   | 24,3 | 46 |    |  |
| M32510-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1          | 64   | 27,5 | 50 |    |  |
| M32510-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42            | 81   | 34   | 70 |    |  |

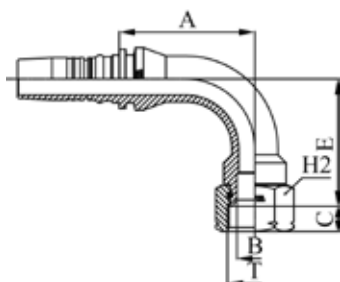
## SAE STANDARD CONNECTIONS



### M42512

**JIC FEMALE 37° CONE SEAT - SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS<br>mm |      |      |    |    |    |  |
|--------------|-----------|------|--------|--------------|--|------------------|------|------|----|----|----|--|
|              | DN        | Dash | inch   |              |  | T                | B    | A    | C  | H1 | H2 |  |
| M42512-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 15               | 36   | 14,2 | 32 | 32 |    |  |
| M42512-12-16 | 19        | - 12 | 3/4"   | 1.5/16" - 12 |  | 21,7             | 32,5 | 15,2 | 41 | 41 |    |  |
| M42512-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 21,7             | 40,5 | 15,2 | 41 | 41 |    |  |
| M42512-16-20 | 25        | - 16 | 1"     | 1.5/8" - 12  |  | 26,1             | 44   | 16,2 | 50 | 50 |    |  |
| M42512-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1             | 51,5 | 16,2 | 50 | 50 |    |  |
| M42512-20-24 | 31        | - 20 | 1.1/4" | 1.7/8" - 12  |  | 30,5             | 51   | 18,8 | 55 | 60 |    |  |
| M42512-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 31               | 54,5 | 18,8 | 55 | 60 |    |  |
| M42512-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42               | 54   | 24   | 70 | 75 |    |  |

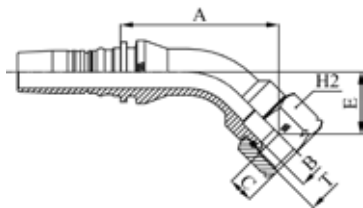


## SAE STANDARD CONNECTIONS

### M42592

**90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS<br>mm |       |      |      |    |    |  |
|--------------|-----------|------|--------|--------------|--|------------------|-------|------|------|----|----|--|
|              | DN        | Dash | inch   |              |  | T                | B     | A    | C    | E  | H2 |  |
| M42592-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 15               | 72,5  | 14,2 | 66   | 32 |    |  |
| M42592-12-16 | 19        | - 12 | 3/4"   | 1.5/16" - 12 |  | 21,7             | 72,5  | 15,2 | 71,5 | 41 |    |  |
| M42592-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 21,7             | 82,5  | 15,2 | 77,5 | 41 |    |  |
| M42592-16-20 | 25        | - 16 | 1"     | 1.5/8" - 12  |  | 26,1             | 90,5  | 16,2 | 76,5 | 50 |    |  |
| M42592-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1             | 98,5  | 16,2 | 92   | 50 |    |  |
| M42592-20-24 | 31        | - 20 | 1.1/4" | 1.7/8" - 12  |  | 32,1             | 101,5 | 18,8 | 108  | 60 |    |  |
| M42592-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1             | 111,5 | 18,8 | 106  | 60 |    |  |
| M42592-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42               | 144,5 | 24   | 137  | 75 |    |  |



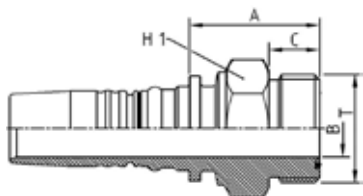
## SAE STANDARD CONNECTIONS

### M42542

45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)

| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS mm |       |      |      |    |    |  |
|--------------|-----------|------|--------|--------------|--|---------------|-------|------|------|----|----|--|
|              | DN        | Dash | inch   |              |  | T             | B     | A    | C    | E  | H2 |  |
| M42542-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 15            | 86    | 14,2 | 33   | 32 |    |  |
| M42542-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 21,7          | 95    | 15,2 | 37   | 41 |    |  |
| M42542-16-20 | 25        | - 16 | 1"     | 1.5/8" - 12  |  | 26,1          | 102,5 | 16,2 | 36,5 | 50 |    |  |
| M42542-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1          | 115,5 | 16,2 | 45   | 50 |    |  |
| M42542-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1          | 126,5 | 18,8 | 50   | 60 |    |  |
| M42542-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42            | 161,5 | 24   | 63,5 | 75 |    |  |

FITTINGS F 3-6



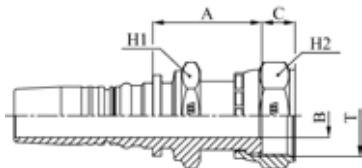
## SAE STANDARD CONNECTIONS

### M32410

ORFS MALE - SAE J516 / ISO 12151-1

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS mm |      |      |    |    |  |
|--------------|-----------|------|--------|---------------|--|---------------|------|------|----|----|--|
|              | DN        | Dash | inch   |               |  | T             | B    | A    | C  | H1 |  |
| M32410-10-08 | 16        | - 10 | 5/8"   | 13/16" - 16   |  | 9,3           | 33   | 12,8 | 27 |    |  |
| M32410-10-10 | 16        | - 10 | 5/8"   | 1" - 14       |  | 12            | 36   | 15,5 | 27 |    |  |
| M32410-10-12 | 16        | - 10 | 5/8"   | 1.3/16" - 12  |  | 15            | 39   | 17   | 32 |    |  |
| M32410-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5          | 40,5 | 17   | 32 |    |  |
| M32410-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19,8          | 42,5 | 17,5 | 38 |    |  |
| M32410-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5          | 45   | 17,5 | 41 |    |  |
| M32410-16-20 | 25        | - 16 | 1"     | 1.11/16" - 12 |  | 25            | 48   | 17,5 | 46 |    |  |
| M32410-20-16 | 31        | - 20 | 1.1/4" | 1.7/16" - 12  |  | 19,5          | 47   | 17,5 | 50 |    |  |
| M32410-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25            | 50,5 | 17,5 | 46 |    |  |
| M32410-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 31            | 53   | 17,5 | 55 |    |  |
| M32410-32-24 | 51        | - 32 | 2"     | 2" - 12       |  | 31            | 53   | 17,5 | 70 |    |  |

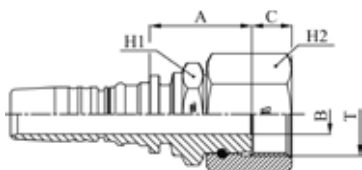
## SAE STANDARD CONNECTIONS



### M42411

**ORFS FEMALE - SAE J516 / ISO 12151-1 PULLBACK TYPE (CRIMPED BACK-NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |      |      |    |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|------|------|----|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B    | A    | C  | H1 | H2 |  |
| M42411-10-10 | 16        | - 10 | 5/8"   | 1" - 14       |  | 11,5             | 40,5 | 12,5 | 24 | 30 |    |  |
| M42411-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 48   | 13,5 | 32 | 36 |    |  |
| M42411-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19               | 50   | 13,5 | 36 | 41 |    |  |
| M42411-16-12 | 25        | - 16 | 1"     | 1.3/16" - 12  |  | 14,3             | 50   | 13,5 | 41 | 36 |    |  |
| M42411-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 51,5 | 13,5 | 41 | 41 |    |  |
| M42411-16-20 | 25        | - 16 | 1"     | 1.11/16" - 12 |  | 26               | 48,5 | 14,8 | 41 | 50 |    |  |
| M42411-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 55   | 14,8 | 50 | 50 |    |  |
| M42411-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 31               | 58   | 15,8 | 60 | 60 |    |  |



## SAE STANDARD CONNECTIONS

### M42412

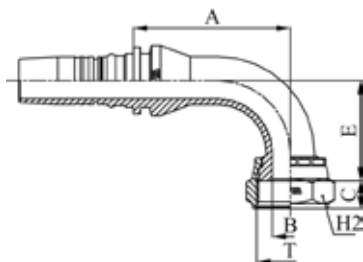
**ORFS FEMALE - SAE J516 / ISO 12151-1 HEAVY TYPE (THRUST-WIRE NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |    |      |    |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|----|------|----|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B  | A    | C  | H1 | H2 |  |
| M42412-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 37 | 14,1 | 32 | 36 |    |  |
| M42412-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19,8             | 41 | 15   | 41 | 46 |    |  |
| M42412-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 42 | 15   | 41 | 46 |    |  |
| M42412-16-20 | 25        | - 16 | 1"     | 1.11/16" - 12 |  | 26               | 50 | 15,1 | 46 | 55 |    |  |
| M42412-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 52 | 15,1 | 50 | 55 |    |  |
| M42412-20-24 | 31        | - 20 | 1.1/4" | 2" - 12       |  | 31               | 53 | 15   | 55 | 60 |    |  |
| M42412-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 31               | 55 | 15   | 60 | 60 |    |  |

## SAE STANDARD CONNECTIONS

### M42491

90° ORFS FEMALE SWEPT ELBOW - SAE J516 / ISO 12151-1  
(CRIMPED BACK-NUT)

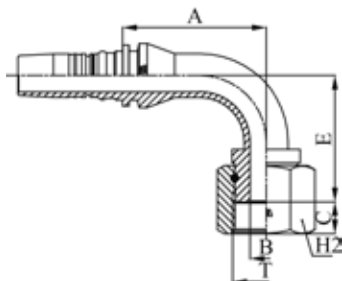


| PART. REF.      | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |       |      |      |    |    |  |
|-----------------|-----------|------|--------|---------------|--|------------------|-------|------|------|----|----|--|
|                 | DN        | Dash | inch   |               |  | T                | B     | A    | C    | E  | H2 |  |
| M42491-10-12    | 16        | - 10 | 5/8"   | 1.3/16" - 12  |  | 14,3             | 51    | 13,5 | 47   | 36 |    |  |
| M42491-12-12    | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 65    | 13,5 | 48   | 36 |    |  |
| M42491-12-12109 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 65    | 13,5 | 109  | 36 |    |  |
| M42491-12-16    | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19               | 70    | 13,5 | 53   | 41 |    |  |
| M42491-16-16    | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 85    | 13,5 | 57   | 41 |    |  |
| M42491-16-16128 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 85    | 13,5 | 128  | 41 |    |  |
| M42491-16-20    | 25        | - 16 | 1"     | 1.11/16" - 12 |  | 24               | 85    | 14,8 | 58   | 50 |    |  |
| M42491-20-20    | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 98,5  | 14,8 | 65   | 50 |    |  |
| M42491-24-24    | 38        | - 24 | 1.1/2" | 2" - 12       |  | 31               | 115,5 | 15,8 | 79,5 | 60 |    |  |

## SAE STANDARD CONNECTIONS

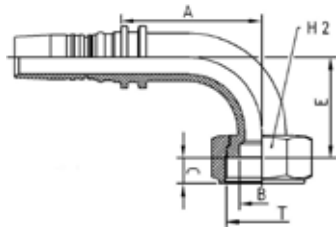
### M42492

90° ORFS FEMALE SWEPT ELBOW - SAE J516 / ISO 12151-1 HEAVY  
TYPE (THRUST-WIRE-NUT)



| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |       |      |      |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|-------|------|------|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B     | A    | C    | E  | H2 |  |
| M42492-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 72,5  | 14,1 | 70,5 | 36 |    |  |
| M42492-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 82,5  | 15   | 84,5 | 46 |    |  |
| M42492-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 98,5  | 15,1 | 98   | 55 |    |  |
| M42492-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 31               | 111,5 | 15   | 109  | 60 |    |  |

# INTERLOCK PLUS TYPE

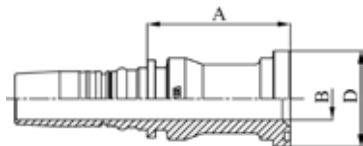


SAE STANDARD CONNECTIONS

**M42493**

**90° ORFS FEMALE SWEPT ELBOW - SAE J516 / ISO 12151-1 (SLIP-ON NUT)**

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |      |      |      |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|------|------|------|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B    | A    | C    | E  | H2 |  |
| M42493-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19,8             | 67   | 14,8 | 53   | 41 |    |  |
| M42493-16-20 | 25        | - 16 | 1"     | 1.11/16" - 12 |  | 26               | 81,5 | 14,8 | 58,5 | 50 |    |  |
| M42493-20-24 | 31        | - 20 | 1.1/4" | 2" - 12       |  | 32               | 100  | 14,8 | 70,5 | 60 |    |  |



## SAE STANDARD CONNECTIONS

### M43310

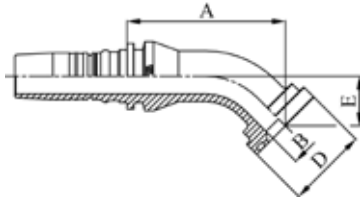
ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3

| PART. REF.   | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |      |      |       |  |  |  |
|--------------|-----------|------|--------|--------|------------------|------|------|-------|--|--|--|
|              | DN        | Dash | inch   |        | Inch             | B    | A    | D     |  |  |  |
| M43310-10-16 | 16        | - 10 | 5/8"   | 1"     |                  | 20   | 64   | 44,6  |  |  |  |
| M43310-12-12 | 19        | - 12 | 3/4"   | 3/4"   |                  | 16   | 60   | 38    |  |  |  |
| M43310-12-16 | 19        | - 12 | 3/4"   | 1"     |                  | 20   | 65,5 | 44,6  |  |  |  |
| M43310-16-12 | 25        | - 16 | 1"     | 3/4"   |                  | 16   | 67   | 38    |  |  |  |
| M43310-16-16 | 25        | - 16 | 1"     | 1"     |                  | 20   | 66,5 | 44,6  |  |  |  |
| M43310-16-20 | 25        | - 16 | 1"     | 1.1/4" |                  | 26,1 | 73   | 51    |  |  |  |
| M43310-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |                  | 26,1 | 75   | 51    |  |  |  |
| M43310-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |                  | 32,1 | 80   | 60,5  |  |  |  |
| M43310-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |                  | 32,1 | 80,5 | 60,5  |  |  |  |
| M43310-24-32 | 38        | - 24 | 1.1/2" | 2"     |                  | 42   | 88,5 | 71,6  |  |  |  |
| M43310-32-24 | 38        | - 24 | 1.1/2" | 2"     |                  | 32,1 | 104  | 60,5  |  |  |  |
| M43310-32-32 | 51        | - 32 | 2"     | 2"     |                  | 42   | 82,5 | 71,6  |  |  |  |
| M43310-40-40 | 63        | - 40 | 2.1/2" | 2.1/2" |                  | 51,5 | 92,5 | 84,3  |  |  |  |
| M43310-48-48 | 76        | - 48 | 3"     | 3"     |                  | 62,5 | 101  | 101,6 |  |  |  |

# SAE STANDARD CONNECTIONS

## M43340

45° ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3



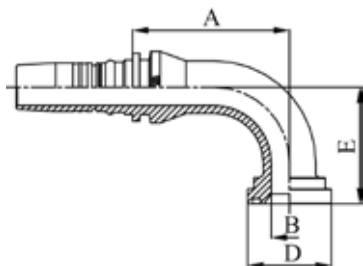
| PART. REF.      | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |       |      |  |  |  |
|-----------------|-----------|------|--------|--------|--|------------------|-------|-------|------|--|--|--|
|                 | DN        | Dash | inch   | Inch   |  | B                | A     | D     | E    |  |  |  |
| M43340-12-12    | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 75,5  | 38    | 26   |  |  |  |
| M43340-12-16    | 19        | - 12 | 3/4"   | 1"     |  | 20               | 76    | 44,6  | 23   |  |  |  |
| M43340-16-16    | 25        | - 16 | 1"     | 1"     |  | 20               | 87    | 44,6  | 27,5 |  |  |  |
| M43340-16-16032 | 25        | - 16 | 1"     | 1"     |  | 20               | 92    | 44,5  | 32   |  |  |  |
| M43340-16-20    | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 87,5  | 51    | 27,5 |  |  |  |
| M43340-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26,1             | 100,5 | 51    | 29,5 |  |  |  |
| M43340-20-20038 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26,1             | 109   | 50,9  | 38   |  |  |  |
| M43340-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32,1             | 101,5 | 60,5  | 31   |  |  |  |
| M43340-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32,1             | 111   | 60,5  | 34,5 |  |  |  |
| M43340-24-24044 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32,1             | 120   | 60,5  | 44   |  |  |  |
| M43340-24-32    | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 113   | 71,6  | 34,5 |  |  |  |
| M43340-32-32    | 51        | - 32 | 2"     | 2"     |  | 42               | 128,5 | 71,6  | 39   |  |  |  |
| M43340-32-32056 | 51        | - 32 | 2"     | 2"     |  | 42               | 146   | 71,6  | 56   |  |  |  |
| M43340-48-48    | 76        | - 48 | 3"     | 3"     |  | 59               | 147,5 | 101,6 | 53   |  |  |  |

All items are made from solid with the exception of M43340-48-48

## SAE STANDARD CONNECTIONS

### M43390

90° ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3



FITTINGS

F 3-14

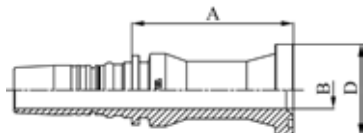
| PART. REF.      | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |       |       |     |   |
|-----------------|-----------|------|--------|--------|------------------|-------|-------|-----|---|
|                 | DN        | Dash | inch   |        | Inch             | B     | A     | D   | E |
| M43390-10-16    | 16        | - 10 | 5/8"   | 1"     | 20               | 71    | 44,6  | 52  |   |
| M43390-12-12    | 19        | - 12 | 3/4"   | 3/4"   | 16               | 72    | 38    | 52  |   |
| M43390-12-12058 | 19        | - 12 | 3/4"   | 3/4"   | 16               | 72    | 38    | 58  |   |
| M43390-12-16    | 19        | - 12 | 3/4"   | 1"     | 20               | 72,5  | 44,6  | 52  |   |
| M43390-16-16    | 25        | - 16 | 1"     | 1"     | 20               | 83,5  | 44,6  | 62  |   |
| M43390-16-16070 | 25        | - 16 | 1"     | 1"     | 20               | 83,5  | 44,5  | 70  |   |
| M43390-16-20    | 25        | - 16 | 1"     | 1.1/4" | 26               | 83,5  | 51    | 62  |   |
| M43390-20-16    | 31        | - 20 | 1.1/4" | 1"     | 19,8             | 96,5  | 44,6  | 66  |   |
| M43390-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" | 26,1             | 99    | 51    | 70  |   |
| M43390-20-20090 | 31        | - 20 | 1.1/4" | 1.1/4" | 26,1             | 99    | 50,9  | 90  |   |
| M43390-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" | 32,1             | 98,5  | 60,5  | 72  |   |
| M43390-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" | 32,1             | 111,5 | 60,5  | 84  |   |
| M43390-24-24104 | 38        | - 24 | 1.1/2" | 1.1/2" | 32,1             | 111,5 | 60,5  | 104 |   |
| M43390-24-32    | 38        | - 24 | 1.1/2" | 2"     | 42               | 111,5 | 71,6  | 84  |   |
| M43390-32-32    | 51        | - 32 | 2"     | 2"     | 42               | 133,5 | 71,6  | 99  |   |
| M43390-32-32138 | 51        | - 32 | 2"     | 2"     | 42               | 133,5 | 71,5  | 138 |   |
| M43390-48-48    | 76        | - 48 | 3"     | 3"     | 59               | 145   | 101,6 | 140 |   |

All items are made from solid with the exception of M43390-48-48

## SAE STANDARD CONNECTIONS

### M43610

ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3

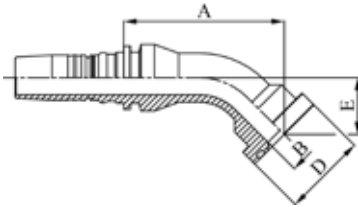


| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |       |  |  |  |  |
|--------------|-----------|------|--------|--------|--|------------------|-------|-------|--|--|--|--|
|              | DN        | Dash | inch   | Inch   |  | B                | A     | D     |  |  |  |  |
| M43610-10-12 | 16        | - 10 | 5/8"   | 3/4"   |  | 16               | 65    | 41,5  |  |  |  |  |
| M43610-10-16 | 16        | - 10 | 5/8"   | 1"     |  | 20               | 81,5  | 47,7  |  |  |  |  |
| M43610-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 71,5  | 41,4  |  |  |  |  |
| M43610-12-16 | 19        | - 12 | 3/4"   | 1"     |  | 20               | 83,5  | 47,7  |  |  |  |  |
| M43610-16-12 | 25        | - 16 | 1"     | 3/4"   |  | 16               | 80,5  | 41,4  |  |  |  |  |
| M43610-16-16 | 25        | - 16 | 1"     | 1"     |  | 20               | 84,5  | 47,7  |  |  |  |  |
| M43610-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 89    | 54,2  |  |  |  |  |
| M43610-20-16 | 31        | - 20 | 1.1/4" | 1"     |  | 20               | 87    | 47,7  |  |  |  |  |
| M43610-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26,1             | 91    | 54,2  |  |  |  |  |
| M43610-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32,1             | 97    | 63,7  |  |  |  |  |
| M43610-24-20 | 38        | - 24 | 1.1/2" | 1.1/4" |  | 26               | 101   | 54,2  |  |  |  |  |
| M43610-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32,1             | 97,5  | 63,7  |  |  |  |  |
| M43610-24-32 | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 113   | 79,6  |  |  |  |  |
| M43610-32-24 | 51        | - 32 | 2"     | 1.1/2" |  | 32,1             | 117   | 63,7  |  |  |  |  |
| M43610-32-32 | 51        | - 32 | 2"     | 2"     |  | 42               | 112,5 | 79,6  |  |  |  |  |
| M43610-40-40 | 63        | - 40 | 2.1/2" | 2.1/2" |  | 51,5             | 126,5 | 107,9 |  |  |  |  |
| M43610-48-48 | 76        | - 48 | 3"     | 3"     |  | 62,5             | 167   | 131,9 |  |  |  |  |

# SAE STANDARD CONNECTIONS

## M43640

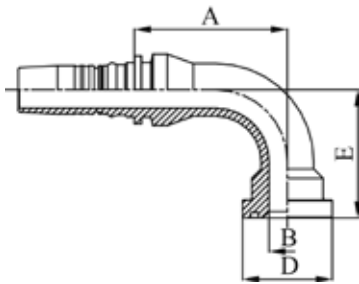
45° ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3



| PART. REF.      | HOSE BORE |      | Flange |        | DIMENSIONS<br>mm |       |      |      |  |  |  |  |
|-----------------|-----------|------|--------|--------|------------------|-------|------|------|--|--|--|--|
|                 | DN        | Dash | inch   | Inch   | B                | A     | D    | E    |  |  |  |  |
| M43640-10-12    | 16        | - 10 | 5/8"   | 3/4"   | 16               | 71    | 41,4 | 31   |  |  |  |  |
| M43640-10-16    | 16        | - 10 | 5/8"   | 1"     | 20               | 83,5  | 47,7 | 32,5 |  |  |  |  |
| M43640-12-12    | 19        | - 12 | 3/4"   | 3/4"   | 16               | 79    | 41,4 | 26   |  |  |  |  |
| M43640-12-16    | 19        | - 12 | 3/4"   | 1"     | 20               | 85,5  | 47,7 | 32,5 |  |  |  |  |
| M43640-16-12    | 25        | - 16 | 1"     | 3/4"   | 16               | 87    | 41,4 | 28   |  |  |  |  |
| M43640-16-16    | 25        | - 16 | 1"     | 1"     | 20               | 91,5  | 47,7 | 32,5 |  |  |  |  |
| M43640-16-20    | 25        | - 16 | 1"     | 1.1/4" | 26               | 93,5  | 54,2 | 37,5 |  |  |  |  |
| M43640-20-16    | 31        | - 20 | 1.1/4" | 1"     | 20               | 106,5 | 47,7 | 36   |  |  |  |  |
| M43640-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" | 26,1             | 108   | 54,2 | 37,5 |  |  |  |  |
| M43640-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" | 32,1             | 115   | 63,7 | 45   |  |  |  |  |
| M43640-24-20    | 38        | - 24 | 1.1/2" | 1.1/4" | 26               | 124,5 | 54,2 | 43   |  |  |  |  |
| M43640-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" | 32               | 124,5 | 63,7 | 44   |  |  |  |  |
| M43640-24-32    | 38        | - 24 | 1.1/2" | 2"     | 42               | 135,5 | 79,6 | 55,5 |  |  |  |  |
| M43640-32-32    | 51        | - 32 | 2"     | 2"     | 42               | 154   | 79,6 | 60,5 |  |  |  |  |
| M43640-32-32056 | 51        | - 32 | 2"     | 2"     | 42               | 150   | 79,6 | 56,5 |  |  |  |  |

## M43690

90° ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3

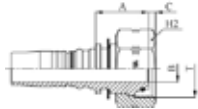
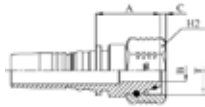


| PART. REF.      | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |      |       |  |  |  |
|-----------------|-----------|------|--------|--------|--|------------------|-------|------|-------|--|--|--|
|                 | DN        | Dash | inch   | Inch   |  | B                | A     | D    | E     |  |  |  |
| M43690-10-12    | 16        | - 10 | 5/8"   | 3/4"   |  | 16               | 56,5  | 41,4 | 60,5  |  |  |  |
| M43690-12-12    | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 72,5  | 41,4 | 59    |  |  |  |
| M43690-12-16    | 19        | - 12 | 3/4"   | 1"     |  | 20               | 72,5  | 47,7 | 65    |  |  |  |
| M43690-16-12    | 25        | - 16 | 1"     | 3/4"   |  | 16               | 81,5  | 41,4 | 62    |  |  |  |
| M43690-16-16    | 25        | - 16 | 1"     | 1"     |  | 20               | 81    | 47,7 | 68    |  |  |  |
| M43690-16-20    | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 78,5  | 54,2 | 76    |  |  |  |
| M43690-20-16    | 31        | - 20 | 1.1/4" | 1"     |  | 20               | 98,5  | 47,7 | 79    |  |  |  |
| M43690-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26,1             | 98,5  | 54,2 | 81    |  |  |  |
| M43690-20-20090 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26,1             | 98,5  | 54,1 | 90    |  |  |  |
| M43690-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32,1             | 98,5  | 63,7 | 91,5  |  |  |  |
| M43690-24-20    | 38        | - 24 | 1.1/2" | 1.1/4" |  | 26               | 111   | 54,2 | 91    |  |  |  |
| M43690-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 112,5 | 63,7 | 94,5  |  |  |  |
| M43690-24-24104 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 112,5 | 63,7 | 104   |  |  |  |
| M43690-24-32    | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 112,5 | 79,6 | 110,5 |  |  |  |
| M43690-32-32    | 51        | - 32 | 2"     | 2"     |  | 42               | 140,5 | 79,6 | 132   |  |  |  |
| M43690-32-32138 | 51        | - 32 | 2"     | 2"     |  | 42               | 140,5 | 79,6 | 138   |  |  |  |

## DIN STANDARD CONNECTIONS

### M41612/M41613

**METRIC O-RING FEMALE 24° CONE HEAVY DUTY - DIN 20066 / ISO  
12151-2**



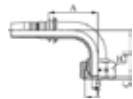
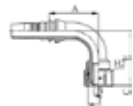
| PART. REF.   | HOSE BORE |      |        | Thread   | Pipe | DIMENSIONS<br>mm |      |     |    |   |    |  |
|--------------|-----------|------|--------|----------|------|------------------|------|-----|----|---|----|--|
|              | DN        | Dash | inch   |          |      | T                | mm   | B   | A  | C | H2 |  |
| M41612-10-24 | 16        | - 10 | 5/8"   | M 24x1,5 | 16   | 9,3              | 31   | 4   | 30 |   |    |  |
| M41613-10-30 | 16        | - 10 | 5/8"   | M 30x2   | 20   | 12               | 37   | 3,5 | 36 |   |    |  |
| M41612-12-30 | 19        | - 12 | 3/4"   | M 30x2   | 20   | 12,5             | 44   | 3,2 | 36 |   |    |  |
| M41613-12-36 | 19        | - 12 | 3/4"   | M 36x2   | 25   | 14,5             | 42   | 3,4 | 41 |   |    |  |
| M41613-12-42 | 19        | - 12 | 3/4"   | M 42x2   | 30   | 19               | 36   | 6,3 | 50 |   |    |  |
| M41612-16-36 | 25        | - 16 | 1"     | M 36x2   | 25   | 16               | 47   | 4,1 | 41 |   |    |  |
| M41613-16-42 | 25        | - 16 | 1"     | M 42x2   | 30   | 19,5             | 46,5 | 5,3 | 50 |   |    |  |
| M41613-16-52 | 25        | - 16 | 1"     | M 52x2   | 38   | 26,1             | 49,5 | 8   | 60 |   |    |  |
| M41612-20-42 | 31        | - 20 | 1.1/4" | M 42x2   | 30   | 19               | 47,5 | 6   | 50 |   |    |  |
| M41613-20-52 | 31        | - 20 | 1.1/4" | M 52x2   | 38   | 26,1             | 41,5 | 8   | 60 |   |    |  |
| M41612-24-52 | 38        | - 24 | 1.1/2" | M 52x2   | 38   | 29               | 52,5 | 8,8 | 60 |   |    |  |

M41612: THRUST-WIRE NUT - M41613: SLIP-ON NUT

## DIN STANDARD CONNECTIONS

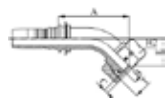
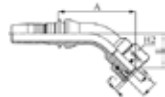
### M41692/M41693

90° METRIC O-RING FEMALE SWEPT ELBOW 24° CONE HEAVY DUTY  
DIN 20066 / ISO 12151-2



| PART. REF.   | HOSE BORE |      |        | Thread | Pipe | DIMENSIONS<br>mm |       |     |      |    |   |    |
|--------------|-----------|------|--------|--------|------|------------------|-------|-----|------|----|---|----|
|              | DN        | Dash | inch   |        |      | T                | mm    | B   | A    | C  | E | H2 |
| M41693-10-30 | 16        | - 10 | 5/8"   | M 30x2 | 20   | 12               | 52,5  | 3,5 | 57,5 | 36 |   |    |
| M41692-12-30 | 19        | - 12 | 3/4"   | M 30x2 | 25   | 12,5             | 64    | 3,2 | 68,5 | 36 |   |    |
| M41693-12-36 | 19        | - 12 | 3/4"   | M 36x2 | 25   | 14,5             | 67    | 3,4 | 67,5 | 41 |   |    |
| M41692-16-36 | 25        | - 16 | 1"     | M 36x2 | 25   | 16               | 81,5  | 4,1 | 89   | 41 |   |    |
| M41693-16-42 | 25        | - 16 | 1"     | M 42x2 | 30   | 19,5             | 81,5  | 5,3 | 75,5 | 50 |   |    |
| M41692-20-42 | 31        | - 20 | 1.1/4" | M 42x2 | 30   | 19,1             | 103,5 | 6   | 90   | 50 |   |    |
| M41693-20-52 | 31        | - 20 | 1.1/4" | M 52x2 | 38   | 26,1             | 100   | 8   | 86,5 | 60 |   |    |

M41692: THRUST-WIRE NUT - M41693: SLIP-ON NUT



## DIN STANDARD CONNECTIONS

### M41642/M41643

45° METRIC O-RING FEMALE SWEPT ELBOW 24° CONE HEAVY DUTY  
DIN 20066 / ISO 12151-2

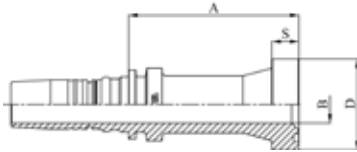
| PART. REF.   | HOSE BORE |      |        | Thread | Pipe | DIMENSIONS<br>mm |       |     |      |    |   |    |
|--------------|-----------|------|--------|--------|------|------------------|-------|-----|------|----|---|----|
|              | DN        | Dash | inch   |        |      | T                | mm    | B   | A    | C  | E | H2 |
| M41643-10-30 | 16        | - 10 | 5/8"   | M 30x2 | 20   | 12               | 66,5  | 3,5 | 29,5 | 36 |   |    |
| M41642-12-30 | 19        | - 12 | 3/4"   | M 30x2 | 20   | 12,5             | 79    | 3,2 | 35   | 36 |   |    |
| M41643-12-36 | 19        | - 12 | 3/4"   | M 36x2 | 25   | 14,5             | 81    | 3,4 | 33,5 | 41 |   |    |
| M41642-16-36 | 25        | - 16 | 1"     | M 36x2 | 25   | 16               | 103   | 4,1 | 45,5 | 41 |   |    |
| M41643-16-42 | 25        | - 16 | 1"     | M 42x2 | 30   | 19,5             | 93    | 5,3 | 36   | 50 |   |    |
| M41642-20-42 | 31        | - 20 | 1.1/4" | M 42x2 | 30   | 19,1             | 116,5 | 6   | 44,5 | 50 |   |    |
| M41643-20-52 | 31        | - 20 | 1.1/4" | M 52x2 | 38   | 26,1             | 110   | 8   | 40   | 60 |   |    |
| M41642-24-52 | 38        | - 24 | 1.1/2" | M 52x2 | 38   | 29               | 128   | 8,8 | 51,5 | 60 |   |    |

M41642: THRUST-WIRE NUT - M41643: SLIP-ON NUT

## ORIGINAL EQUIPMENT CONNECTIONS

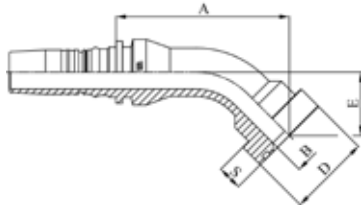
### M43910

#### STRAIGHT SUPERCAT SERIES FLANGE



| PART. REF.   | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |      |       |      |      |  |  |  |
|--------------|-----------|------|--------|--------|------------------|------|-------|------|------|--|--|--|
|              | DN        | Dash | inch   |        | Inch             | B    | A     | D    | S    |  |  |  |
| M43910-12-12 | 19        | - 12 | 3/4"   | 3/4"   |                  | 16   | 77    | 41,5 | 14,3 |  |  |  |
| M43910-12-16 | 19        | - 12 | 3/4"   | 1"     |                  | 20   | 88,5  | 47,7 | 14,3 |  |  |  |
| M43910-16-16 | 25        | - 16 | 1"     | 1"     |                  | 20   | 89,5  | 47,7 | 14,3 |  |  |  |
| M43910-16-20 | 25        | - 16 | 1"     | 1.1/4" |                  | 26   | 93,5  | 54   | 14,3 |  |  |  |
| M43910-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |                  | 26,1 | 95    | 54   | 14,3 |  |  |  |
| M43910-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |                  | 32,1 | 98,5  | 63,6 | 14,3 |  |  |  |
| M43910-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |                  | 32,1 | 99    | 63,6 | 14,3 |  |  |  |
| M43910-24-32 | 38        | - 24 | 1.1/2" | 2"     |                  | 42   | 115   | 79,3 | 14,3 |  |  |  |
| M43910-32-24 | 51        | - 32 | 2"     | 1.1/2" |                  | 32,1 | 119,5 | 63,6 | 14,3 |  |  |  |
| M43910-32-32 | 51        | - 32 | 2"     | 2"     |                  | 42   | 114,5 | 79,3 | 14,3 |  |  |  |

## ORIGINAL EQUIPMENT CONNECTIONS



### M43940

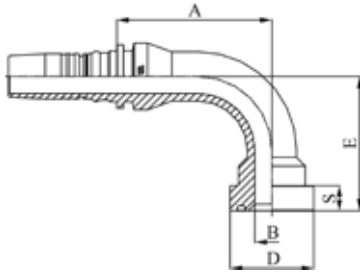
#### 45° SUPERCAT SERIES FLANGE

| PART. REF.   | HOSE BORE |      | Flange |        | DIMENSIONS<br>mm |       |      |      |      |  |  |
|--------------|-----------|------|--------|--------|------------------|-------|------|------|------|--|--|
|              | DN        | Dash | inch   | inch   | B                | A     | D    | E    | S    |  |  |
| M43940-12-12 | 19        | - 12 | 3/4"   | 3/4"   | 16               | 85    | 41,5 | 32   | 14,3 |  |  |
| M43940-12-16 | 19        | - 12 | 3/4"   | 1"     | 20               | 91,5  | 47,7 | 35,5 | 14,3 |  |  |
| M43940-16-16 | 25        | - 16 | 1"     | 1"     | 20               | 100,5 | 47,7 | 36,5 | 14,3 |  |  |
| M43940-16-20 | 25        | - 16 | 1"     | 1.1/4" | 26,1             | 103,5 | 54   | 40,5 | 14,3 |  |  |
| M43940-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" | 26,1             | 110,5 | 54   | 40,5 | 14,3 |  |  |
| M43940-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" | 32               | 124,5 | 63,7 | 50,5 | 14,3 |  |  |
| M43940-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" | 32               | 125,5 | 63,7 | 45,5 | 14,3 |  |  |
| M43940-24-32 | 38        | - 24 | 1.1/2" | 2"     | 42               | 139,5 | 79,3 | 56,5 | 14,3 |  |  |
| M43940-32-32 | 51        | - 32 | 2"     | 2"     | 42               | 158,5 | 79,3 | 61,5 | 14,3 |  |  |

## ORIGINAL EQUIPMENT CONNECTIONS

### M43990

#### 90° SUPERCAT SERIES FLANGE



| PART. REF.   | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |       |      |       |      |   |  |
|--------------|-----------|------|--------|--------|------------------|-------|------|-------|------|---|--|
|              | DN        | Dash | inch   |        | Inch             | B     | A    | D     | E    | S |  |
| M43990-12-12 | 19        | - 12 | 3/4"   | 3/4"   | 16               | 72,5  | 41,5 | 64,5  | 14,3 |   |  |
| M43990-12-16 | 19        | - 12 | 3/4"   | 1"     | 20               | 75    | 47,7 | 69,5  | 14,3 |   |  |
| M43990-16-16 | 25        | - 16 | 1"     | 1"     | 20               | 88,5  | 47,7 | 76,5  | 14,3 |   |  |
| M43990-16-20 | 25        | - 16 | 1"     | 1.1/4" | 26,1             | 86,5  | 54   | 80,5  | 14,3 |   |  |
| M43990-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" | 26,1             | 98,5  | 54   | 85    | 14,3 |   |  |
| M43990-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" | 32               | 104   | 63,7 | 101   | 14,3 |   |  |
| M43990-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" | 32               | 112,5 | 63,7 | 96    | 14,3 |   |  |
| M43990-24-32 | 38        | - 24 | 1.1/2" | 2"     | 42               | 115   | 79,3 | 112   | 14,3 |   |  |
| M43990-32-32 | 51        | - 32 | 2"     | 2"     | 42               | 144   | 79,3 | 133,5 | 14,3 |   |  |

# **manuli**<sup>®</sup> HYDRAULICS

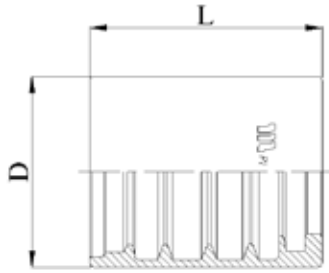


# SPIRALFIT

| FITTING CODE  | SECTION | PAGE |
|---------------|---------|------|
| M05400        | 6       | 1    |
| M05500        | 6       | 1    |
| M70050        | 6       | 26   |
| M70510        | 6       | 2    |
| M71210        | 6       | 17   |
| M72410        | 6       | 6    |
| M72510        | 6       | 4    |
| M72810        | 6       | 9    |
| M73010        | 6       | 9    |
| M80812        | 6       | 2    |
| M80842        | 6       | 3    |
| M80892        | 6       | 3    |
| M81612        | 6       | 17   |
| M81642-M81643 | 6       | 18   |
| M81692-M81693 | 6       | 18   |
| M82412        | 6       | 7    |
| M82442        | 6       | 8    |
| M82492        | 6       | 7    |
| M82542        | 6       | 5    |
| M82592        | 6       | 5    |
| M82712        | 6       | 4    |
| M83301P       | 6       | 16   |
| M83311        | 6       | 10   |
| M83321        | 6       | 10   |
| M83331        | 6       | 11   |
| M83341        | 6       | 11   |

| FITTING CODE     | SECTION | PAGE |
|------------------|---------|------|
| M83361           | 6       | 12   |
| M83371           | 6       | 12   |
| M83391           | 6       | 13   |
| M83611           | 6       | 14   |
| M83631           | 6       | 14   |
| M83641           | 6       | 15   |
| M83661           | 6       | 15   |
| M83691           | 6       | 16   |
| M83711           | 6       | 19   |
| M83741           | 6       | 19   |
| M83791           | 6       | 19   |
| M83911           | 6       | 20   |
| M83921           | 6       | 20   |
| M83931           | 6       | 21   |
| M83941           | 6       | 21   |
| M83961           | 6       | 22   |
| M83971           | 6       | 22   |
| M83991           | 6       | 23   |
| M83991 LONG DROP | 6       | 23   |
| M84492           | 6       | 8    |
| M84792           | 6       | 6    |
| M88511           | 6       | 24   |
| M88541           | 6       | 24   |
| M88591           | 6       | 25   |
| M89510WL         | 6       | 25   |



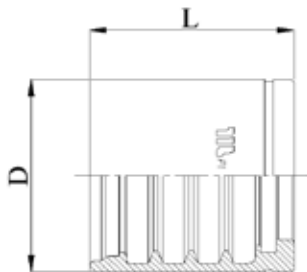


FERRULE

**M05400**

NO-SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (4 PLY)

| PART. REF. | HOSE BORE |      |        | DIMENSIONS<br>mm |  |       |       |  |  |  |  |  |
|------------|-----------|------|--------|------------------|--|-------|-------|--|--|--|--|--|
|            | DN        | Dash | inch   |                  |  | D     | L     |  |  |  |  |  |
| M05400-10  | 16        | - 10 | 5/8"   |                  |  | 40    | 44,3  |  |  |  |  |  |
| M05400-12  | 19        | - 12 | 3/4"   |                  |  | 43,8  | 53,3  |  |  |  |  |  |
| M05400-16  | 25        | - 16 | 1"     |                  |  | 52    | 64,3  |  |  |  |  |  |
| M05400-20  | 31        | - 20 | 1.1/4" |                  |  | 59,3  | 72    |  |  |  |  |  |
| M05400-24  | 38        | - 24 | 1.1/2" |                  |  | 68,5  | 78    |  |  |  |  |  |
| M05400-32  | 51        | - 32 | 2"     |                  |  | 84,6  | 97,1  |  |  |  |  |  |
| M05400-40  | 63        | - 40 | 2.1/2" |                  |  | 97    | 116   |  |  |  |  |  |
| M05400-48  | 76        | - 48 | 3"     |                  |  | 109,8 | 124   |  |  |  |  |  |
| M05400-56  | 89        | - 56 | 3.1/2" |                  |  | 127,7 | 123,5 |  |  |  |  |  |
| M05400-64  | 102       | - 64 | 4"     |                  |  | 145   | 126,5 |  |  |  |  |  |



FERRULE

**M05500**

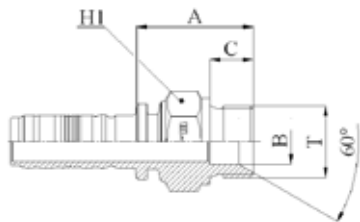
NO-SKIVE FERRULE FOR HEAVY DUTY SPIRAL HOSES (4-6 PLY)

| PART. REF. | HOSE BORE |      |        | DIMENSIONS<br>mm |  |    |      |  |  |  |  |  |
|------------|-----------|------|--------|------------------|--|----|------|--|--|--|--|--|
|            | DN        | Dash | inch   |                  |  | D  | L    |  |  |  |  |  |
| M05500-20  | 31        | - 20 | 1.1/4" |                  |  | 66 | 70   |  |  |  |  |  |
| M05500-24  | 38        | - 24 | 1.1/2" |                  |  | 75 | 79   |  |  |  |  |  |
| M05500-32  | 51        | - 32 | 2"     |                  |  | 90 | 98,1 |  |  |  |  |  |

## BS STANDARD CONNECTIONS

### M70510

BSP MALE PARALLEL 60° CONE SEAT - BS5200 / ISO 12151-6

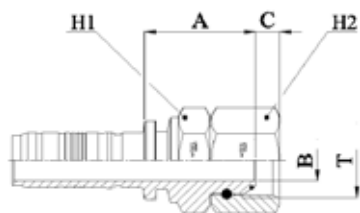


| PART. REF.   | HOSE BORE |      |        | Thread      | DIMENSIONS<br>mm |      |      |    |    |  |  |
|--------------|-----------|------|--------|-------------|------------------|------|------|----|----|--|--|
|              | DN        | Dash | inch   |             | T                | B    | A    | C  | H1 |  |  |
| M70510-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   |                  | 16,8 | 43,5 | 16 | 32 |  |  |
| M70510-12-16 | 19        | - 12 | 3/4"   | 1" - 11     |                  | 22,2 | 49,5 | 19 | 41 |  |  |
| M70510-16-16 | 25        | - 16 | 1"     | 1" - 11     |                  | 22,2 | 51   | 19 | 41 |  |  |
| M70510-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 |                  | 28,5 | 56   | 20 | 50 |  |  |
| M70510-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 |                  | 28,5 | 56,5 | 20 | 50 |  |  |
| M70510-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 |                  | 33,5 | 60,5 | 22 | 55 |  |  |
| M70510-32-32 | 51        | - 32 | 2"     | 2" - 11     |                  | 42   | 64   | 25 | 70 |  |  |

## BS STANDARD CONNECTIONS

### M80812

BSP O-RING FEMALE 60° CONE - BS5200 / ISO 12151-6

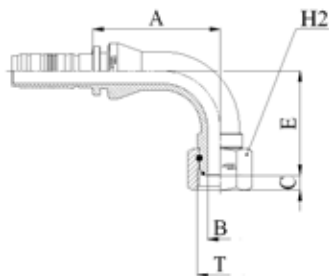


| PART. REF.   | HOSE BORE |      |        | Thread      | DIMENSIONS<br>mm |      |      |      |    |    |
|--------------|-----------|------|--------|-------------|------------------|------|------|------|----|----|
|              | DN        | Dash | inch   |             | T                | B    | A    | C    | H1 | H2 |
| M80812-12-12 | 19        | - 12 | 3/4"   | 3/4" - 14   |                  | 14,5 | 39,5 | 8,5  | 32 | 32 |
| M80812-12-16 | 19        | - 12 | 3/4"   | 1" - 11     |                  | 19,5 | 44   | 10,6 | 41 | 41 |
| M80812-16-12 | 25        | - 16 | 1"     | 3/4" - 14   |                  | 15   | 44,5 | 8,5  | 41 | 32 |
| M80812-16-16 | 25        | - 16 | 1"     | 1" - 11     |                  | 19,5 | 45,5 | 10,6 | 41 | 41 |
| M80812-16-20 | 25        | - 16 | 1"     | 1.1/4" - 11 |                  | 26,1 | 50,5 | 10,5 | 50 | 50 |
| M80812-20-16 | 31        | - 20 | 1.1/4" | 1" - 11     |                  | 19   | 48   | 10,6 | 50 | 41 |
| M80812-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" - 11 |                  | 26,1 | 50,5 | 10,5 | 50 | 50 |
| M80812-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" - 11 |                  | 32,1 | 50   | 12,5 | 50 | 60 |
| M80812-24-20 | 38        | - 24 | 1.1/2" | 1.1/4" - 11 |                  | 26,1 | 52   | 10,5 | 55 | 50 |
| M80812-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" - 11 |                  | 32,1 | 52   | 12,5 | 60 | 60 |
| M80812-32-32 | 51        | - 32 | 2"     | 2" - 11     |                  | 42   | 53,5 | 16,1 | 70 | 70 |

## BS STANDARD CONNECTIONS

### M80892

90° BSP O-RING FEMALE SWEPT ELBOW 60° CONE - BS5200 / ISO 12151-6

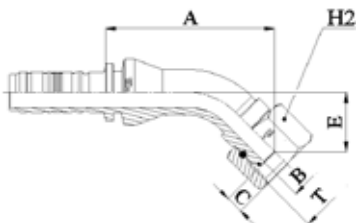


| PART. REF.      | HOSE BORE |      |        | Thread      |  | DIMENSIONS mm |       |      |       |    |  |  |
|-----------------|-----------|------|--------|-------------|--|---------------|-------|------|-------|----|--|--|
|                 | DN        | Dash | inch   |             |  | T             | B     | A    | C     | E  |  |  |
| M80892-12-12    | 19        | - 12 | 3/4"   | 3/4" - 14   |  | 14,5          | 73,5  | 8,5  | 60    | 32 |  |  |
| M80892-12-12050 | 19        | - 12 | 3/4"   | 3/4" - 14   |  | 14,5          | 67,5  | 8,5  | 50    | 32 |  |  |
| M80892-12-16    | 19        | - 12 | 3/4"   | 1" - 11     |  | 19,5          | 73,5  | 10,6 | 62    | 41 |  |  |
| M80892-16-12    | 25        | - 16 | 1"     | 3/4" - 14   |  | 15            | 90    | 8,5  | 70    | 32 |  |  |
| M80892-16-16    | 25        | - 16 | 1"     | 1" - 11     |  | 19,5          | 83    | 10,6 | 76    | 41 |  |  |
| M80892-16-16058 | 25        | - 16 | 1"     | 1" - 11     |  | 19,5          | 74,5  | 10,6 | 58,5  | 41 |  |  |
| M80892-16-20    | 25        | - 16 | 1"     | 1.1/4" - 11 |  | 26,1          | 96    | 10,5 | 78,5  | 50 |  |  |
| M80892-20-16    | 31        | - 20 | 1.1/4" | 1" - 11     |  | 19,5          | 90    | 10,6 | 76    | 41 |  |  |
| M80892-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" - 11 |  | 26            | 88    | 10,5 | 83,5  | 50 |  |  |
| M80892-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" - 11 |  | 32            | 88    | 12,5 | 92    | 60 |  |  |
| M80892-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" - 11 |  | 32            | 103   | 12,5 | 98,5  | 60 |  |  |
| M80892-32-32    | 51        | - 32 | 2"     | 2" - 11     |  | 42            | 135,9 | 16,1 | 140,5 | 70 |  |  |

## BS STANDARD CONNECTIONS

### M80842

45° BSP O-RING FEMALE SWEPT ELBOW 60° CONE BS5200 / ISO 12151-6

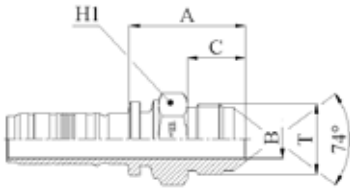


| PART. REF.      | HOSE BORE |      |        | Thread      |  | DIMENSIONS mm |       |      |      |    |  |  |
|-----------------|-----------|------|--------|-------------|--|---------------|-------|------|------|----|--|--|
|                 | DN        | Dash | inch   |             |  | T             | B     | A    | C    | E  |  |  |
| M80842-12-12    | 19        | - 12 | 3/4"   | 3/4" - 14   |  | 14,5          | 82,5  | 8,5  | 29   | 32 |  |  |
| M80842-12-16    | 19        | - 12 | 3/4"   | 1" - 11     |  | 19,5          | 84    | 10,6 | 30   | 41 |  |  |
| M80842-16-12    | 25        | - 16 | 1"     | 3/4" - 14   |  | 15            | 106,5 | 8,5  | 36   | 32 |  |  |
| M80842-16-16    | 25        | - 16 | 1"     | 1" - 11     |  | 19,5          | 95    | 10,6 | 36,5 | 41 |  |  |
| M80842-16-16028 | 25        | - 16 | 1"     | 1" - 11     |  | 19,5          | 84    | 10,6 | 28   | 41 |  |  |
| M80842-16-20    | 25        | - 16 | 1"     | 1.1/4" - 11 |  | 26,1          | 109,5 | 10,5 | 38   | 50 |  |  |
| M80842-20-16    | 31        | - 20 | 1.1/4" | 1" - 11     |  | 19,5          | 102   | 10,6 | 36,5 | 41 |  |  |
| M80842-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" - 11 |  | 26            | 99    | 10,5 | 39   | 50 |  |  |
| M80842-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" - 11 |  | 32            | 114   | 12,5 | 54   | 60 |  |  |
| M80842-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" - 11 |  | 32            | 112,5 | 12,5 | 45   | 60 |  |  |
| M80842-32-32    | 51        | - 32 | 2"     | 2" - 11     |  | 42            | 155   | 16,1 | 66   | 70 |  |  |

## SAE STANDARD CONNECTIONS

### M72510

JIC MALE 37° CONE - SAE J516 / ISO 12151-5

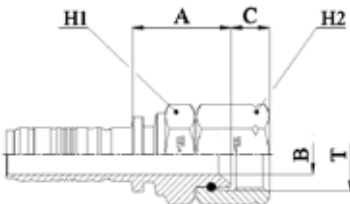


| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS<br>mm |      |      |    |    |  |  |
|--------------|-----------|------|--------|--------------|--|------------------|------|------|----|----|--|--|
|              | DN        | Dash | inch   |              |  | T                | B    | A    | C  | H1 |  |  |
| M72510-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 14,5             | 44,5 | 22   | 30 |    |  |  |
| M72510-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 19,5             | 51,5 | 23   | 38 |    |  |  |
| M72510-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1             | 56   | 24,3 | 46 |    |  |  |
| M72510-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1             | 60   | 27,5 | 50 |    |  |  |
| M72510-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42               | 75,5 | 34   | 65 |    |  |  |

## SAE STANDARD CONNECTIONS

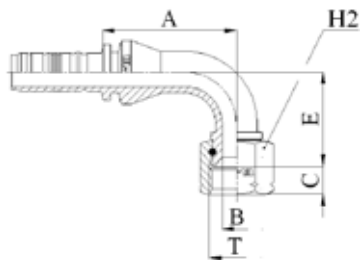
### M82712

JIC FEMALE 37° CONE SEAT DOUBLE HEXAGON SAE J516 / ISO 12151-5 (THRUST-WIRE NUT)



| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS<br>mm |      |      |    |    |    |  |
|--------------|-----------|------|--------|--------------|--|------------------|------|------|----|----|----|--|
|              | DN        | Dash | inch   |              |  | T                | B    | A    | C  | H1 | H2 |  |
| M82712-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 14,5             | 36,5 | 14,2 | 32 | 32 |    |  |
| M82712-12-16 | 19        | - 12 | 3/4"   | 1.5/16" - 12 |  | 19,5             | 36,5 | 15,2 | 32 | 41 |    |  |
| M82712-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 19,5             | 41,5 | 15,2 | 41 | 41 |    |  |
| M82712-16-20 | 25        | - 16 | 1"     | 1.5/8" - 12  |  | 26,1             | 46,5 | 16,2 | 41 | 50 |    |  |
| M82712-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26,1             | 51,5 | 16,2 | 50 | 50 |    |  |
| M82712-20-24 | 31        | - 20 | 1.1/4" | 1.7/8" - 12  |  | 32               | 54,5 | 18,8 | 55 | 60 |    |  |
| M82712-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1             | 54,5 | 18,8 | 55 | 60 |    |  |
| M82712-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42               | 56   | 24   | 65 | 75 |    |  |

## SAE STANDARD CONNECTIONS

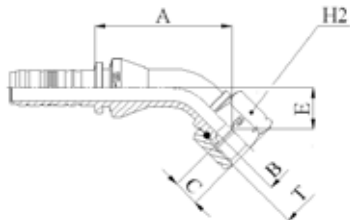


### M82592

**90° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516 / ISO 12151-5**

| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS mm |      |      |      |    |  |  |
|--------------|-----------|------|--------|--------------|--|---------------|------|------|------|----|--|--|
|              | DN        | Dash | inch   |              |  | T             | B    | A    | C    | E  |  |  |
| M82592-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 14,5          | 67,5 | 14,2 | 47,5 | 32 |  |  |
| M82592-12-16 | 19        | - 12 | 3/4"   | 1.5/16" - 12 |  | 19,8          | 73,5 | 15,2 | 57,5 | 41 |  |  |
| M82592-16-12 | 25        | - 16 | 1"     | 1.1/16" - 12 |  | 14,5          | 76,5 | 14,2 | 47,5 | 32 |  |  |
| M82592-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 19,5          | 74,5 | 15,2 | 55,5 | 41 |  |  |
| M82592-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26            | 88   | 16,2 | 86,5 | 50 |  |  |
| M82592-20-24 | 31        | - 20 | 1.1/4" | 1.7/8" - 12  |  | 32            | 88   | 18,8 | 90,5 | 60 |  |  |
| M82592-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1          | 105  | 18,8 | 101  | 60 |  |  |
| M82592-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42            | 145  | 24   | 139  | 75 |  |  |

## SAE STANDARD CONNECTIONS



### M82542

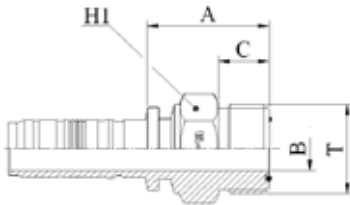
**45° JIC FEMALE SWEPT ELBOW 37° CONE SEAT - SAE J516 / ISO 12151-5**

| PART. REF.   | HOSE BORE |      |        | Thread       |  | DIMENSIONS mm |       |      |      |    |  |  |
|--------------|-----------|------|--------|--------------|--|---------------|-------|------|------|----|--|--|
|              | DN        | Dash | inch   |              |  | T             | B     | A    | C    | E  |  |  |
| M82542-12-12 | 19        | - 12 | 3/4"   | 1.1/16" - 12 |  | 14,5          | 75    | 14,2 | 22,5 | 32 |  |  |
| M82542-16-16 | 25        | - 16 | 1"     | 1.5/16" - 12 |  | 19,5          | 81,5  | 15,2 | 26   | 41 |  |  |
| M82542-20-20 | 31        | - 20 | 1.1/4" | 1.5/8" - 12  |  | 26            | 101   | 16,2 | 41,5 | 50 |  |  |
| M82542-24-24 | 38        | - 24 | 1.1/2" | 1.7/8" - 12  |  | 32,1          | 121,5 | 18,8 | 48,5 | 60 |  |  |
| M82542-32-32 | 51        | - 32 | 2"     | 2.1/2" - 12  |  | 42            | 162   | 24   | 63,5 | 75 |  |  |

## SAE STANDARD CONNECTIONS

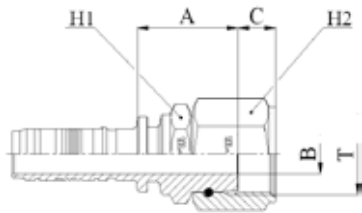
### M72410

ORFS MALE - SAE J516 / ISO 12151-1



| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |      |      |    |    |  |  |
|--------------|-----------|------|--------|---------------|--|------------------|------|------|----|----|--|--|
|              | DN        | Dash | inch   |               |  | T                | B    | A    | C  | H1 |  |  |
| M72410-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 41   | 17   | 32 |    |  |  |
| M72410-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 46   | 17,5 | 41 |    |  |  |
| M72410-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 26               | 50,5 | 17,5 | 46 |    |  |  |
| M72410-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 32               | 53   | 17,5 | 55 |    |  |  |

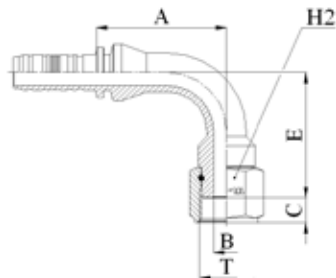
## SAE STANDARD CONNECTIONS



### M82412

ORFS FEMALE SAE J516/ISO 12151.1

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |      |      |    |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|------|------|----|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B    | A    | C  | H1 | H2 |  |
| M82412-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 38   | 14,1 | 32 | 36 |    |  |
| M82412-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19,5             | 42   | 15   | 41 | 46 |    |  |
| M82412-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 43   | 15   | 41 | 46 |    |  |
| M82412-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 52,5 | 15,1 | 50 | 55 |    |  |
| M82412-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 30,5             | 55   | 15   | 60 | 60 |    |  |

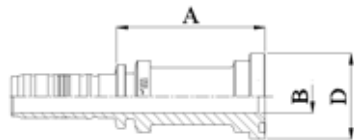


## SAE STANDARD CONNECTIONS

### M82492

90° ORFS FEMALE SWEPT ELBOW SAE J516/ISO 12151-1

| PART. REF.   | HOSE BORE |      |        | Thread        |  | DIMENSIONS<br>mm |      |      |      |    |    |  |
|--------------|-----------|------|--------|---------------|--|------------------|------|------|------|----|----|--|
|              | DN        | Dash | inch   |               |  | T                | B    | A    | C    | E  | H2 |  |
| M82492-12-12 | 19        | - 12 | 3/4"   | 1.3/16" - 12  |  | 14,5             | 73,5 | 14,1 | 70,5 | 36 |    |  |
| M82492-12-16 | 19        | - 12 | 3/4"   | 1.7/16" - 12  |  | 19,5             | 86   | 15   | 71   | 46 |    |  |
| M82492-16-12 | 25        | - 16 | 1"     | 1.3/16" - 12  |  | 14,5             | 89,5 | 14,1 | 70,5 | 36 |    |  |
| M82492-16-16 | 25        | - 16 | 1"     | 1.7/16" - 12  |  | 19,5             | 83   | 15   | 84,5 | 46 |    |  |
| M82492-20-20 | 31        | - 20 | 1.1/4" | 1.11/16" - 12 |  | 25               | 99   | 15,1 | 98   | 55 |    |  |
| M82492-24-24 | 38        | - 24 | 1.1/2" | 2" - 12       |  | 32               | 105  | 15   | 104  | 60 |    |  |

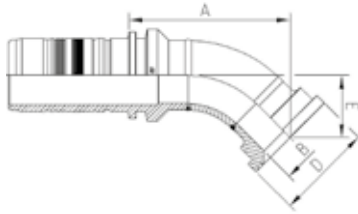


## SAE STANDARD CONNECTIONS

### M83311

ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3

| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |      |       |  |  |  |  |
|--------------|-----------|------|--------|--------|--|------------------|------|-------|--|--|--|--|
|              | DN        | Dash | inch   | Inch   |  | B                | A    | D     |  |  |  |  |
| M83311-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 14,5             | 66,5 | 38    |  |  |  |  |
| M83311-12-16 | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 52,5 | 44,6  |  |  |  |  |
| M83311-16-12 | 25        | - 16 | 1"     | 3/4"   |  | 14,5             | 67,5 | 38    |  |  |  |  |
| M83311-16-16 | 25        | - 16 | 1"     | 1"     |  | 19,5             | 67,5 | 44,6  |  |  |  |  |
| M83311-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 53,5 | 51    |  |  |  |  |
| M83311-20-16 | 31        | - 20 | 1.1/4" | 1"     |  | 19,5             | 69   | 44,6  |  |  |  |  |
| M83311-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 75   | 51    |  |  |  |  |
| M83311-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 60   | 60,5  |  |  |  |  |
| M83311-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 78,5 | 60,5  |  |  |  |  |
| M83311-24-32 | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 60,5 | 71,6  |  |  |  |  |
| M83311-32-32 | 51        | - 32 | 2"     | 2"     |  | 42               | 82,5 | 71,6  |  |  |  |  |
| M83311-40-40 | 63        | - 40 | 2.1/2" | 2.1/2" |  | 51,5             | 93   | 84,3  |  |  |  |  |
| M83311-48-48 | 76        | - 48 | 3"     | 3"     |  | 62,5             | 88,5 | 101,6 |  |  |  |  |
| M83311-56-56 | 89        | - 56 | 3.1/2" | 3.1/2" |  | 76               | 98,5 | 114,3 |  |  |  |  |
| M83311-64-64 | 102       | - 64 | 4"     | 4"     |  | 89               | 105  | 127   |  |  |  |  |



## M83341

### 45° ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3

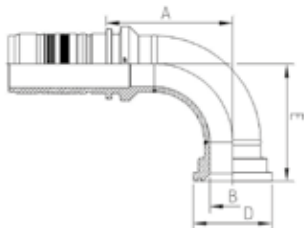
| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |       |      |  |  |  |  |
|--------------|-----------|------|--------|--------|--|------------------|-------|-------|------|--|--|--|--|
|              | DN        | Dash | inch   | Inch   |  | B                | A     | D     | E    |  |  |  |  |
| M83341-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 78    | 38    | 24,5 |  |  |  |  |
| M83341-12-16 | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 78    | 44,6  | 24,5 |  |  |  |  |
| M83341-16-12 | 25        | - 16 | 1"     | 3/4"   |  | 16               | 90,5  | 38    | 24,5 |  |  |  |  |
| M83341-16-16 | 25        | - 16 | 1"     | 1"     |  | 19,5             | 86,5  | 44,6  | 26,5 |  |  |  |  |
| M83341-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 92    | 51    | 32   |  |  |  |  |
| M83341-20-16 | 31        | - 20 | 1.1/4" | 1"     |  | 19,5             | 90,5  | 44,6  | 26,5 |  |  |  |  |
| M83341-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 87,5  | 51    | 29   |  |  |  |  |
| M83341-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 88,5  | 60,5  | 30   |  |  |  |  |
| M83341-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 102,5 | 60,5  | 38   |  |  |  |  |
| M83341-24-32 | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 102,5 | 71,6  | 38   |  |  |  |  |
| M83341-32-32 | 51        | - 32 | 2"     | 2"     |  | 42               | 143,5 | 71,6  | 52   |  |  |  |  |
| M83341-40-40 | 63        | - 40 | 2.1/2" | 2.1/2" |  | 49,2             | 131   | 84,3  | 44,5 |  |  |  |  |
| M83341-48-48 | 76        | - 48 | 3"     | 3"     |  | 59               | 147   | 101,6 | 53   |  |  |  |  |
| M83341-56-56 | 89        | - 56 | 3.1/2" | 3.1/2" |  | 73,7             | 169   | 114,3 | 68   |  |  |  |  |

All items are made from solid with the exception of M83341-40-40, M83341-48-48 and M83341-56-56

## SAE STANDARD CONNECTIONS

### M83391

90° ISO/SAE CODE 61 FLANGE - SAE J516 / ISO 12151-3



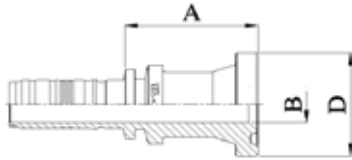
| PART. REF.      | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |       |     |   |  |  |
|-----------------|-----------|------|--------|--------|--|------------------|-------|-------|-----|---|--|--|
|                 | DN        | Dash | inch   |        |  | Inch             | B     | A     | D   | E |  |  |
| M83391-12-12    | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 72,5  | 38    | 58  |   |  |  |
| M83391-12-16    | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 72,5  | 44,6  | 70  |   |  |  |
| M83391-12-16054 | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 72,5  | 44,6  | 54  |   |  |  |
| M83391-16-12    | 25        | - 16 | 1"     | 3/4"   |  | 16               | 85    | 38    | 58  |   |  |  |
| M83391-16-16    | 25        | - 16 | 1"     | 1"     |  | 19,5             | 82    | 44,6  | 60  |   |  |  |
| M83391-16-20    | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 82    | 51    | 68  |   |  |  |
| M83391-20-16    | 31        | - 20 | 1.1/4" | 1"     |  | 19,5             | 86    | 44,6  | 60  |   |  |  |
| M83391-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 85    | 51    | 67  |   |  |  |
| M83391-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 85    | 60,5  | 69  |   |  |  |
| M83391-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 96,5  | 60,5  | 81  |   |  |  |
| M83391-24-32    | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 101,5 | 71,6  | 84  |   |  |  |
| M83391-32-32    | 51        | - 32 | 2"     | 2"     |  | 42               | 135,5 | 71,6  | 120 |   |  |  |
| M83391-40-40    | 63        | - 40 | 2.1/2" | 2.1/2" |  | 49,2             | 128   | 84,3  | 118 |   |  |  |
| M83391-48-48    | 76        | - 48 | 3"     | 3"     |  | 59               | 144,5 | 101,6 | 140 |   |  |  |
| M83391-56-56    | 89        | - 56 | 3.1/2" | 3.1/2" |  | 73,7             | 164   | 114,3 | 160 |   |  |  |

All items are made from solid with the exception of M83391-40-40, M83391-48-48 and M83391-56-56

## SAE STANDARD CONNECTIONS

### M83611

ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3

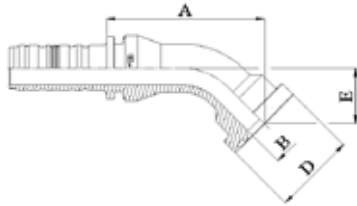


| PART. REF.   | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |      |      |      |  |  |  |  |
|--------------|-----------|------|--------|--------|------------------|------|------|------|--|--|--|--|
|              | DN        | Dash | inch   |        | Inch             | B    | A    | D    |  |  |  |  |
| M83611-12-12 | 19        | - 12 | 3/4"   | 3/4"   |                  | 14,5 | 53,5 | 41,4 |  |  |  |  |
| M83611-12-16 | 19        | - 12 | 3/4"   | 1"     |                  | 19,5 | 59,5 | 47,7 |  |  |  |  |
| M83611-16-12 | 25        | - 16 | 1"     | 3/4"   |                  | 16   | 62,5 | 41,4 |  |  |  |  |
| M83611-16-16 | 25        | - 16 | 1"     | 1"     |                  | 19,5 | 63,5 | 47,7 |  |  |  |  |
| M83611-16-20 | 25        | - 16 | 1"     | 1.1/4" |                  | 26   | 70   | 54,2 |  |  |  |  |
| M83611-20-16 | 31        | - 20 | 1.1/4" | 1"     |                  | 19,5 | 62   | 47,7 |  |  |  |  |
| M83611-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |                  | 26   | 66   | 54,2 |  |  |  |  |
| M83611-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |                  | 32   | 74,5 | 63,7 |  |  |  |  |
| M83611-24-20 | 38        | - 24 | 1.1/2" | 1.1/4" |                  | 26   | 66,5 | 54,2 |  |  |  |  |
| M83611-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |                  | 32   | 74,5 | 63,7 |  |  |  |  |
| M83611-24-32 | 38        | - 24 | 1.1/2" | 2"     |                  | 42   | 88,5 | 79,6 |  |  |  |  |
| M83611-32-24 | 51        | - 32 | 2"     | 1.1/2" |                  | 32   | 91,5 | 63,7 |  |  |  |  |
| M83611-32-32 | 51        | - 32 | 2"     | 2"     |                  | 42   | 91,5 | 79,6 |  |  |  |  |

## SAE STANDARD CONNECTIONS

### M83641

45° ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3

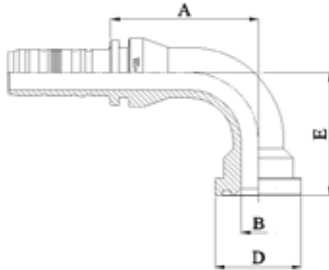


| PART. REF.   | HOSE BORE |      |        | Flange | DIMENSIONS<br>mm |      |       |      |      |  |  |  |  |
|--------------|-----------|------|--------|--------|------------------|------|-------|------|------|--|--|--|--|
|              | DN        | Dash | inch   |        | Inch             | B    | A     | D    | E    |  |  |  |  |
| M83641-12-12 | 19        | - 12 | 3/4"   | 3/4"   |                  | 16   | 81,5  | 41,4 | 28   |  |  |  |  |
| M83641-12-16 | 19        | - 12 | 3/4"   | 1"     |                  | 19,5 | 85,5  | 47,7 | 32,5 |  |  |  |  |
| M83641-16-12 | 25        | - 16 | 1"     | 3/4"   |                  | 16   | 87,5  | 41,4 | 28   |  |  |  |  |
| M83641-16-16 | 25        | - 16 | 1"     | 1"     |                  | 19,5 | 92    | 47,7 | 32,5 |  |  |  |  |
| M83641-16-20 | 25        | - 16 | 1"     | 1.1/4" |                  | 26   | 97    | 54,2 | 37   |  |  |  |  |
| M83641-20-16 | 31        | - 20 | 1.1/4" | 1"     |                  | 19,5 | 95,5  | 47,7 | 31,5 |  |  |  |  |
| M83641-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |                  | 26   | 96,5  | 54,2 | 38   |  |  |  |  |
| M83641-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |                  | 32   | 104,5 | 63,7 | 44,5 |  |  |  |  |
| M83641-24-20 | 38        | - 24 | 1.1/2" | 1.1/4" |                  | 26   | 110,5 | 54,2 | 38   |  |  |  |  |
| M83641-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |                  | 32   | 109,5 | 63,7 | 44   |  |  |  |  |
| M83641-24-32 | 38        | - 24 | 1.1/2" | 2"     |                  | 42   | 121,5 | 79,6 | 56   |  |  |  |  |
| M83641-32-32 | 51        | - 32 | 2"     | 2"     |                  | 42   | 148   | 79,6 | 59   |  |  |  |  |

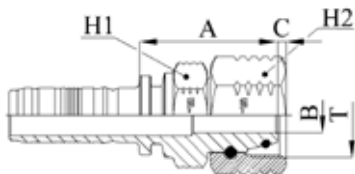
## SAE STANDARD CONNECTIONS

### M83691

90° ISO/SAE CODE 62 FLANGE - SAE J516 / ISO 12151-3



| PART. REF.      | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |      |      |     |  |  |  |
|-----------------|-----------|------|--------|--------|--|------------------|------|------|-----|--|--|--|
|                 | DN        | Dash | inch   | Inch   |  | B                | A    | D    | E   |  |  |  |
| M83691-12-12    | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 72,5 | 41,4 | 59  |  |  |  |
| M83691-12-16    | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 72,6 | 47,7 | 65  |  |  |  |
| M83691-16-12    | 25        | - 16 | 1"     | 3/4"   |  | 16               | 82   | 41,4 | 62  |  |  |  |
| M83691-16-16    | 25        | - 16 | 1"     | 1"     |  | 19,5             | 82   | 47,7 | 68  |  |  |  |
| M83691-16-20    | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 82   | 54,2 | 90  |  |  |  |
| M83691-16-20075 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 82   | 54,2 | 75  |  |  |  |
| M83691-20-16    | 31        | - 20 | 1.1/4" | 1"     |  | 19,5             | 86   | 47,7 | 68  |  |  |  |
| M83691-20-20    | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 85   | 54,2 | 90  |  |  |  |
| M83691-20-24    | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 85   | 63,7 | 104 |  |  |  |
| M83691-24-20    | 38        | - 24 | 1.1/2" | 1.1/4" |  | 26               | 99   | 54,2 | 90  |  |  |  |
| M83691-24-24    | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 98   | 63,7 | 104 |  |  |  |
| M83691-24-32    | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 98   | 79,6 | 138 |  |  |  |
| M83691-32-32    | 51        | - 32 | 2"     | 2"     |  | 42               | 136  | 79,6 | 138 |  |  |  |



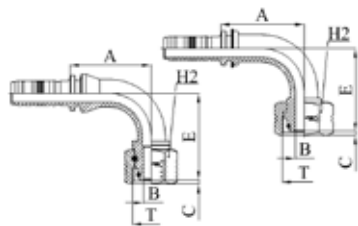
## DIN STANDARD CONNECTIONS

### M81612

**METRIC O-RING FEMALE 24° CONE HEAVY DUTY - DIN 20066 / ISO 12151-2**

| PART. REF.   | HOSE BORE |      |        | Thread | Pipe | DIMENSIONS<br>mm |      |     |    |    |    |    |
|--------------|-----------|------|--------|--------|------|------------------|------|-----|----|----|----|----|
|              | DN        | Dash | inch   |        |      | T                | mm   | B   | A  | C  | H1 | H2 |
| M81612-12-30 | 19        | - 12 | 3/4"   | M 30x2 | 20   | 12,5             | 49,5 | 3,2 | 32 | 36 |    |    |
| M81612-12-36 | 19        | - 12 | 3/4"   | M 36x2 | 25   | 14,5             | 52   | 4,1 | 36 | 41 |    |    |
| M81612-12-42 | 19        | - 12 | 3/4"   | M 42x2 | 30   | 19,5             | 52,5 | 6   | 41 | 50 |    |    |
| M81612-16-36 | 25        | - 16 | 1"     | M 36x2 | 25   | 16               | 56   | 4,1 | 41 | 41 |    |    |
| M81612-16-42 | 25        | - 16 | 1"     | M 42x2 | 30   | 19,5             | 54,5 | 6   | 41 | 50 |    |    |
| M81612-16-52 | 25        | - 16 | 1"     | M 52x2 | 38   | 25               | 56   | 8,8 | 50 | 60 |    |    |
| M81612-20-42 | 31        | - 20 | 1.1/4" | M 42x2 | 30   | 19,5             | 56   | 6,1 | 46 | 50 |    |    |
| M81612-20-52 | 31        | - 20 | 1.1/4" | M 52x2 | 38   | 25               | 57   | 8,8 | 50 | 60 |    |    |
| M81612-24-52 | 38        | - 24 | 1.1/2" | M 52x2 | 38   | 26,1             | 58   | 8,8 | 55 | 60 |    |    |

## DIN STANDARD CONNECTIONS

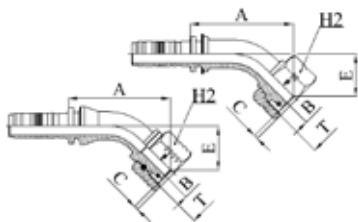


### M81692/M81693

**90° METRIC O-RING FEMALE SWEPT ELBOW 24° CONE HEAVY DUTY  
DIN 20066 / ISO 12151-2**

| PART. REF.   | HOSE BORE |      |        | Thread | Pipe | DIMENSIONS<br>mm |      |     |      |    |   |    |
|--------------|-----------|------|--------|--------|------|------------------|------|-----|------|----|---|----|
|              | DN        | Dash | inch   |        |      | T                | mm   | B   | A    | C  | E | H2 |
| M81692-12-30 | 19        | - 12 | 3/4"   | M 30x2 | 20   | 12,5             | 64,5 | 3,2 | 68,5 | 36 |   |    |
| M81693-12-36 | 19        | - 12 | 3/4"   | M 36x2 | 25   | 14,5             | 68   | 3,4 | 67,5 | 41 |   |    |
| M81692-16-36 | 25        | - 16 | 1"     | M 36x2 | 25   | 15               | 83   | 4,1 | 87,5 | 41 |   |    |
| M81693-16-42 | 25        | - 16 | 1"     | M 42x2 | 30   | 19,5             | 82,5 | 5,3 | 75,5 | 50 |   |    |
| M81692-20-42 | 31        | - 20 | 1.1/4" | M 42x2 | 30   | 19,1             | 102  | 6   | 90   | 50 |   |    |
| M81693-20-52 | 31        | - 20 | 1.1/4" | M 52x2 | 38   | 26,1             | 101  | 8   | 86,5 | 60 |   |    |

M81692: THRUST-WIRE NUT - M81693: SLIP-ON NUT



## DIN STANDARD CONNECTIONS

### M81642/M81643

**45° METRIC O-RING FEMALE SWEPT ELBOW 24° CONE HEAVY DUTY  
DIN 20066 / ISO 12151-2**

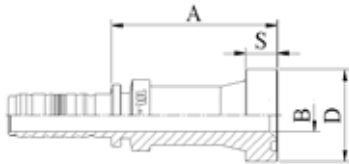
| PART. REF.   | HOSE BORE |      |        | Thread | Pipe | DIMENSIONS<br>mm |       |     |      |    |   |    |
|--------------|-----------|------|--------|--------|------|------------------|-------|-----|------|----|---|----|
|              | DN        | Dash | inch   |        |      | T                | mm    | B   | A    | C  | E | H2 |
| M81642-12-30 | 19        | - 12 | 3/4"   | M 30x2 | 20   | 12,5             | 80    | 3,2 | 35   | 36 |   |    |
| M81643-12-36 | 19        | - 12 | 3/4"   | M 36x2 | 25   | 14,5             | 82    | 3,4 | 33,5 | 41 |   |    |
| M81642-16-36 | 25        | - 16 | 1"     | M 36x2 | 25   | 15               | 103   | 4,1 | 44,5 | 41 |   |    |
| M81643-16-42 | 25        | - 16 | 1"     | M 42x2 | 30   | 19,5             | 94    | 5,3 | 36   | 50 |   |    |
| M81642-20-42 | 31        | - 20 | 1.1/4" | M 42x2 | 30   | 19,1             | 117,5 | 6   | 44   | 50 |   |    |
| M81643-20-52 | 31        | - 20 | 1.1/4" | M 52x2 | 38   | 26,1             | 111   | 8   | 40   | 60 |   |    |

M81642: THRUST-WIRE NUT - M81643: SLIP-ON NUT

## ORIGINAL EQUIPMENT CONNECTIONS

### M83911

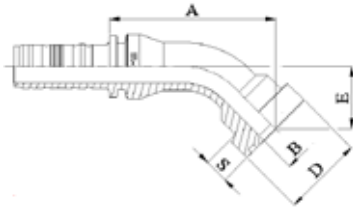
#### STRAIGHT SUPERCAT SERIES FLANGE



| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |       |      |      |  |  |  |
|--------------|-----------|------|--------|--------|--|------------------|-------|------|------|--|--|--|
|              | DN        | Dash | inch   |        |  | Inch             | B     | A    | D    |  |  |  |
| M83911-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 14,5             | 75    | 41,5 | 14,3 |  |  |  |
| M83911-12-16 | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 80,5  | 47,7 | 14,3 |  |  |  |
| M83911-16-16 | 25        | - 16 | 1"     | 1"     |  | 19,5             | 80    | 47,7 | 14,3 |  |  |  |
| M83911-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 84    | 54   | 14,3 |  |  |  |
| M83911-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 80,5  | 54   | 14,3 |  |  |  |
| M83911-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 84    | 63,6 | 14,3 |  |  |  |
| M83911-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 84,5  | 63,6 | 14,3 |  |  |  |
| M83911-24-32 | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 107,5 | 79,3 | 14,3 |  |  |  |
| M83911-32-24 | 51        | - 32 | 2"     | 1.1/2" |  | 32               | 95,5  | 63,6 | 14,3 |  |  |  |
| M83911-32-32 | 51        | - 32 | 2"     | 2"     |  | 42               | 110,5 | 79,3 | 14,3 |  |  |  |

## M83941

### 45° SUPERCAT SERIES FLANGE

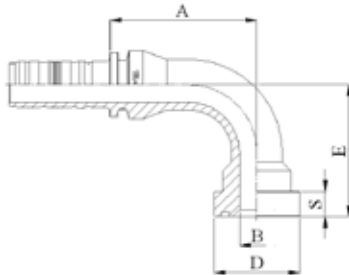


| PART. REF.   | HOSE BORE |      | Flange |        | DIMENSIONS<br>mm |       |      |      |      |  |  |
|--------------|-----------|------|--------|--------|------------------|-------|------|------|------|--|--|
|              | DN        | Dash | inch   | Inch   | B                | A     | D    | E    | S    |  |  |
| M83941-12-12 | 19        | - 12 | 3/4"   | 3/4"   | 16               | 91,5  | 41,5 | 34,5 | 14,3 |  |  |
| M83941-12-16 | 19        | - 12 | 3/4"   | 1"     | 19,5             | 92    | 47,7 | 35,5 | 14,3 |  |  |
| M83941-16-16 | 25        | - 16 | 1"     | 1"     | 19,5             | 98    | 47,7 | 36,5 | 14,3 |  |  |
| M83941-16-20 | 25        | - 16 | 1"     | 1.1/4" | 26               | 101   | 54   | 40,5 | 14,3 |  |  |
| M83941-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" | 26               | 109   | 54   | 40   | 14,3 |  |  |
| M83941-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" | 32               | 106   | 63,7 | 46   | 14,3 |  |  |
| M83941-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" | 32               | 111   | 63,7 | 45,5 | 14,3 |  |  |
| M83941-24-32 | 38        | - 24 | 1.1/2" | 2"     | 42               | 122   | 79,3 | 56,5 | 14,3 |  |  |
| M83941-32-32 | 51        | - 32 | 2"     | 2"     | 42               | 150,5 | 79,3 | 61,5 | 14,3 |  |  |

## ORIGINAL EQUIPMENT CONNECTIONS

### M83991

#### 90° SUPERCAT SERIES FLANGE



| PART. REF.   | HOSE BORE |      |        | Flange |  | DIMENSIONS<br>mm |     |      |       |      |  |  |
|--------------|-----------|------|--------|--------|--|------------------|-----|------|-------|------|--|--|
|              | DN        | Dash | inch   | Inch   |  | B                | A   | D    | E     | S    |  |  |
| M83991-12-12 | 19        | - 12 | 3/4"   | 3/4"   |  | 16               | 76  | 41,5 | 68,5  | 14,3 |  |  |
| M83991-12-16 | 19        | - 12 | 3/4"   | 1"     |  | 19,5             | 76  | 47,7 | 69,5  | 14,3 |  |  |
| M83991-16-16 | 25        | - 16 | 1"     | 1"     |  | 19,5             | 82  | 47,7 | 73,5  | 14,3 |  |  |
| M83991-16-20 | 25        | - 16 | 1"     | 1.1/4" |  | 26               | 82  | 54   | 78,5  | 14,3 |  |  |
| M83991-20-20 | 31        | - 20 | 1.1/4" | 1.1/4" |  | 26               | 94  | 54   | 82    | 14,3 |  |  |
| M83991-20-24 | 31        | - 20 | 1.1/4" | 1.1/2" |  | 32               | 85  | 63,7 | 92    | 14,3 |  |  |
| M83991-24-24 | 38        | - 24 | 1.1/2" | 1.1/2" |  | 32               | 98  | 63,7 | 96    | 14,3 |  |  |
| M83991-24-32 | 38        | - 24 | 1.1/2" | 2"     |  | 42               | 98  | 79,3 | 112   | 14,3 |  |  |
| M83991-32-32 | 51        | - 32 | 2"     | 2"     |  | 42               | 136 | 79,3 | 133,5 | 14,3 |  |  |

# **manuli**<sup>®</sup> HYDRAULICS

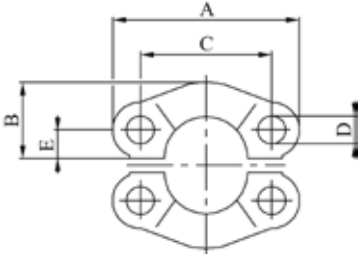


# ACCESSORIES

## ACCESSORIES

### 083308

ISO/SAE CODE 61 SPLIT FLANGE CLAMPS - SAE J518 / ISO 6162-1

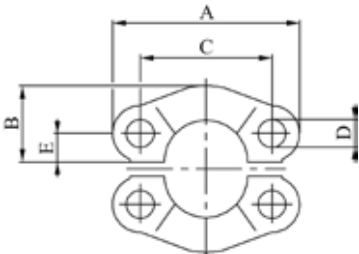


| PART. REF. | HOSE BORE |      |      | DIMENSIONS<br>mm |     |       |      |      |  |  |  |
|------------|-----------|------|------|------------------|-----|-------|------|------|--|--|--|
|            | DN        | Dash | inch | B                | A   | C     | D    | E    |  |  |  |
| O83308-08  |           |      |      | 22,8             | 54  | 38,1  | 8,8  | 8,7  |  |  |  |
| O83308-12  |           |      |      | 25,9             | 65  | 47,6  | 10,8 | 11,1 |  |  |  |
| O83308-16  |           |      |      | 29,2             | 70  | 52,4  | 10,8 | 13,1 |  |  |  |
| O83308-20  |           |      |      | 36,3             | 79  | 58,7  | 12   | 15,1 |  |  |  |
| O83308-24  |           |      |      | 41,1             | 94  | 69,8  | 13,5 | 17,9 |  |  |  |
| O83308-32  |           |      |      | 48,2             | 102 | 77,8  | 13,5 | 21,4 |  |  |  |
| O83308-40  |           |      |      | 54,1             | 114 | 88,9  | 13,5 | 25,4 |  |  |  |
| O83308-48  |           |      |      | 65,3             | 135 | 106,4 | 16,8 | 31   |  |  |  |
| O83308-56  |           |      |      | 70               | 152 | 120,6 | 17   | 34,8 |  |  |  |
| O83308-64  |           |      |      | 75               | 160 | 130,2 | 17   | 38,9 |  |  |  |

## ACCESSORIES

### 083609

ISO/SAE CODE 62 SPLIT FLANGE CLAMPS - SAE J518 / ISO 6162-2



| PART. REF. | HOSE BORE |      |      | DIMENSIONS<br>mm |     |      |     |      |  |  |  |
|------------|-----------|------|------|------------------|-----|------|-----|------|--|--|--|
|            | DN        | Dash | inch | B                | A   | C    | D   | E    |  |  |  |
| O83609-08  |           |      |      | 23,6             | 56  | 40,5 | 8,8 | 9,1  |  |  |  |
| O83609-12  |           |      |      | 30               | 71  | 50,8 | 11  | 11,9 |  |  |  |
| O83609-16  |           |      |      | 34,8             | 81  | 57,1 | 13  | 13,9 |  |  |  |
| O83609-20  |           |      |      | 38,6             | 95  | 66,7 | 15  | 15,9 |  |  |  |
| O83609-24  |           |      |      | 47,5             | 113 | 79,4 | 17  | 18,3 |  |  |  |
| O83609-32  |           |      |      | 56,9             | 133 | 96,8 | 21  | 22,2 |  |  |  |

# **manuli**<sup>®</sup> HYDRAULICS



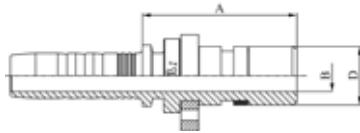
# EASYFIT

| FITTING CODE | SECTION | PAGE |
|--------------|---------|------|
| O82H10       | 11      | 4    |
| M12H10       | 11      | 1    |
| M12H40       | 11      | 1    |
| M12H90       | 11      | 2    |
| M22H10       | 11      | 2    |
| A52032H      | 11      | 3    |
| A52192H      | 11      | 4    |
| A52302H      | 11      | 3    |

## MULTIFIT INSERT

### M12H10

#### EF STRAIGHT MALE INSERT

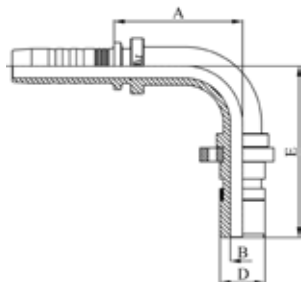


| PART. REF.   | HOSE BORE |      |       | W.P. | DIMENSIONS<br>mm |     |      |    |  |  |  |  |
|--------------|-----------|------|-------|------|------------------|-----|------|----|--|--|--|--|
|              | DN        | Dash | inch  |      | Bar              | B   | A    | D  |  |  |  |  |
| M12H10-04-04 | 6         | - 4  | 1/4"  | 350  |                  | 4   | 30   | 10 |  |  |  |  |
| M12H10-04-06 | 6         | - 4  | 1/4"  | 350  |                  | 7   | 34   | 13 |  |  |  |  |
| M12H10-05-06 | 8         | - 5  | 5/16" | 350  |                  | 7   | 34   | 13 |  |  |  |  |
| M12H10-06-04 | 10        | - 6  | 3/8"  | 350  |                  | 4   | 30,5 | 10 |  |  |  |  |
| M12H10-06-06 | 10        | - 6  | 3/8"  | 350  |                  | 7   | 34,5 | 13 |  |  |  |  |
| M12H10-06-08 | 10        | - 6  | 3/8"  | 350  |                  | 9,3 | 34,5 | 16 |  |  |  |  |
| M12H10-08-06 | 12        | - 8  | 1/2"  | 350  |                  | 7   | 35   | 13 |  |  |  |  |
| M12H10-08-08 | 12        | - 8  | 1/2"  | 350  |                  | 9,3 | 35   | 16 |  |  |  |  |
| M12H10-10-08 | 16        | - 10 | 5/8"  | 350  |                  | 9,3 | 35   | 16 |  |  |  |  |
| M12H10-10-12 | 16        | - 10 | 5/8"  | 280  |                  | 15  | 44,5 | 23 |  |  |  |  |
| M12H10-12-12 | 19        | - 12 | 3/4"  | 280  |                  | 15  | 44,5 | 23 |  |  |  |  |

## MULTIFIT INSERT

### M12H90

#### EF 90° ELBOW MALE INSERT



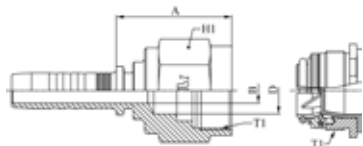
FITTINGS F 11-2

| PART. REF.   | HOSE BORE |      |       | W.P. | DIMENSIONS mm |      |    |      |   |  |  |
|--------------|-----------|------|-------|------|---------------|------|----|------|---|--|--|
|              | DN        | Dash | inch  |      | Bar           | B    | A  | D    | E |  |  |
| M12H90-04-04 | 6         | -4   | 1/4"  | 350  | 4             | 30   | 10 | 40   |   |  |  |
| M12H90-04-06 | 6         | -4   | 1/4"  | 350  | 7             | 32   | 13 | 45   |   |  |  |
| M12H90-05-06 | 8         | -5   | 5/16" | 350  | 7             | 33,5 | 13 | 46,5 |   |  |  |
| M12H90-06-04 | 10        | -6   | 3/8"  | 350  | 4             | 30,5 | 10 | 40   |   |  |  |
| M12H90-06-06 | 10        | -6   | 3/8"  | 350  | 7             | 37   | 13 | 49,5 |   |  |  |
| M12H90-08-06 | 10        | -6   | 3/8"  | 350  | 7             | 37,5 | 13 | 49,5 |   |  |  |
| M12H90-08-08 | 12        | -8   | 1/2"  | 350  | 9,3           | 44   | 16 | 55   |   |  |  |
| M12H90-10-08 | 16        | -10  | 5/8"  | 350  | 9,3           | 47   | 16 | 55   |   |  |  |
| M12H90-10-12 | 16        | -10  | 5/8"  | 280  | 15            | 55   | 23 | 74,5 |   |  |  |
| M12H90-12-12 | 19        | -12  | 3/4"  | 280  | 15            | 62,5 | 23 | 79   |   |  |  |

## MULTIFIT INSERT

### M22H10

#### EF STRAIGHT FEMALE INSERT

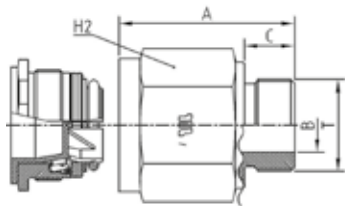


| PART. REF.   | HOSE BORE |      |      | Thread   | W.P. | DIMENSIONS mm |      |    |    |
|--------------|-----------|------|------|----------|------|---------------|------|----|----|
|              | DN        | Dash | inch |          |      | T             | Bar  | B  | A  |
| M22H10-04-04 | 6         | -4   | 1/4" | M 18x1   | 350  | 4             | 30   | 10 | 22 |
| M22H10-06-06 | 10        | -6   | 3/8" | M 22x1   | 350  | 7             | 33,5 | 13 | 25 |
| M22H10-08-08 | 12        | -8   | 1/2" | M 25x1   | 350  | 9,3           | 34   | 16 | 28 |
| M22H10-10-08 | 16        | -10  | 5/8" | M 25x1   | 350  | 12,5          | 34   | 23 | 28 |
| M22H10-10-12 | 16        | -10  | 5/8" | M 33x1,5 | 280  | 12,5          | 45,5 | 23 | 38 |
| M22H10-12-12 | 19        | -12  | 3/4" | M 33x1,5 | 280  | 15            | 46,5 | 23 | 38 |

## ADAPTORS

### A52032H

ADAPTOR BSP MALE O-RING BOSS TYPE ISO 1179 EF FEMALE

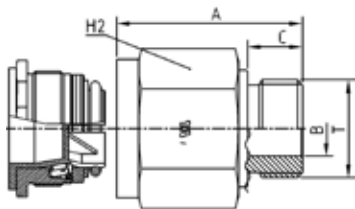


| PART. REF.    | HOSE BORE |      |      | Thread    | W.P. | DIMENSIONS<br>mm |      |      |    |    |   |    |
|---------------|-----------|------|------|-----------|------|------------------|------|------|----|----|---|----|
|               | DN        | Dash | inch |           |      | T                | Bar  | B    | A  | C  | D | H1 |
| A52032H-04-04 | 6         | - 4  | 1/4" | 1/4" - 19 | 350  | 7,5              | 34   | 11,2 | 10 | 22 |   |    |
| A52032H-06-04 | 6         | - 4  | 1/4" | 3/8" - 19 | 350  | 9                | 34   | 11,2 | 10 | 22 |   |    |
| A52032H-06-06 | 10        | - 6  | 3/8" | 3/8" - 19 | 350  | 9,9              | 36,5 | 11,2 | 13 | 25 |   |    |
| A52032H-08-06 | 10        | - 6  | 3/8" | 1/2" - 14 | 350  | 12,3             | 39,5 | 14,5 | 13 | 27 |   |    |
| A52032H-08-08 | 12        | - 8  | 1/2" | 1/2" - 14 | 350  | 12,3             | 40   | 14,5 | 16 | 28 |   |    |
| A52032H-12-12 | 19        | - 12 | 3/4" | 3/4" - 14 | 280  | 15,5             | 50,5 | 14,5 | 23 | 38 |   |    |
| A52032H-16-12 | 19        | - 12 | 3/4" | 1" - 11   | 280  | 20               | 53,5 | 18,6 | 23 | 46 |   |    |

## ADAPTORS

### A52302H

ADAPTOR SAE O-RING BOSS MALE ISO 11926 EF FEMALE

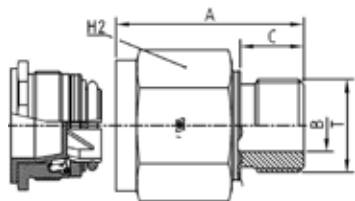


| PART. REF.    | HOSE BORE |      |      | Thread       | W.P. | DIMENSIONS<br>mm |      |      |    |    |   |    |
|---------------|-----------|------|------|--------------|------|------------------|------|------|----|----|---|----|
|               | DN        | Dash | inch |              |      | T                | Bar  | B    | A  | C  | D | H1 |
| A52302H-06-04 | 6         | - 4  | 1/4" | 9/16" - 18   | 350  | 7                | 32,5 | 9,9  | 10 | 22 |   |    |
| A52302H-06-06 | 10        | - 6  | 3/8" | 9/16" - 18   | 350  | 7                | 36   | 9,9  | 13 | 25 |   |    |
| A52302H-08-06 | 10        | - 6  | 3/8" | 3/4" - 16    | 350  | 9,3              | 37   | 11,1 | 13 | 25 |   |    |
| A52302H-08-08 | 12        | - 8  | 1/2" | 3/4" - 16    | 350  | 9,3              | 37   | 11,1 | 16 | 28 |   |    |
| A52302H-10-08 | 12        | - 8  | 1/2" | 7/8" - 14    | 350  | 12,5             | 38,5 | 12,7 | 16 | 28 |   |    |
| A52302H-10-12 | 19        | - 12 | 3/4" | 7/8" - 14    | 280  | 12,5             | 49,5 | 12,7 | 23 | 38 |   |    |
| A52302H-12-12 | 19        | - 12 | 3/4" | 1.1/16" - 12 | 280  | 15               | 51   | 15,1 | 23 | 38 |   |    |

## ADAPTORS

### A52192H

ADAPTOR METRIC MALE ISO 6149 EF FEMALE

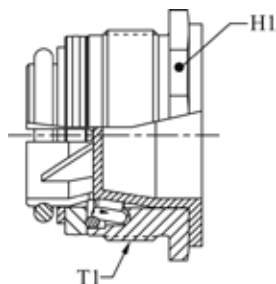


| PART. REF.    | HOSE BORE |      |      | Thread   | W.P. | DIMENSIONS<br>mm |     |      |    |    |   |    |
|---------------|-----------|------|------|----------|------|------------------|-----|------|----|----|---|----|
|               | DN        | Dash | inch |          |      | T                | Bar | B    | A  | C  | D | H1 |
| A52192H-14-04 | 6         | - 4  | 1/4" | M 14x1,5 | 350  | 6                | 34  | 11   | 10 | 22 |   |    |
| A52192H-16-04 | 6         | - 4  | 1/4" | M 16x1,5 | 350  | 7                | 35  | 12,5 | 10 | 22 |   |    |
| A52192H-18-06 | 10        | - 6  | 3/8" | M 18x1,5 | 350  | 9                | 40  | 14   | 13 | 25 |   |    |
| A52192H-22-06 | 10        | - 6  | 3/8" | M 22x1,5 | 350  | 12               | 40  | 15   | 13 | 27 |   |    |
| A52192H-22-08 | 12        | - 8  | 1/2" | M 22x1,5 | 350  | 12               | 40  | 15   | 16 | 28 |   |    |
| A52192H-27-08 | 12        | - 8  | 1/2" | M 27x2   | 350  | 15               | 43  | 18,5 | 16 | 32 |   |    |
| A52192H-27-12 | 19        | - 12 | 3/4" | M 27x2   | 280  | 15               | 55  | 18,5 | 23 | 38 |   |    |
| A52192H-33-12 | 19        | - 12 | 3/4" | M 33x2   | 280  | 20               | 54  | 18,5 | 23 | 41 |   |    |

## ADAPTORS

### O82H10

CARTRIDGE EF



| PART. REF. | HOSE BORE |      |      | Thread   | W.P. | DIMENSIONS<br>mm |     |   |    |  |  |  |
|------------|-----------|------|------|----------|------|------------------|-----|---|----|--|--|--|
|            | DN        | Dash | inch |          |      | T                | Bar | D | H1 |  |  |  |
| O82H10-04  | 6         | - 4  | 1/4" | M 18x1   | 350  | 10               | 19  |   |    |  |  |  |
| O82H10-06  | 10        | - 6  | 3/8" | M 22x1   | 350  | 13               | 23  |   |    |  |  |  |
| O82H10-08  | 12        | - 8  | 1/2" | M 25x1   | 350  | 16               | 26  |   |    |  |  |  |
| O82H10-12  | 19        | - 12 | 3/4" | M 33x1,5 | 280  | 23               | 34  |   |    |  |  |  |