



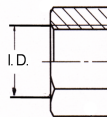
## Metric Parallel Connections (30° / 60° Seat)

Metric Parallel Thread Connections include 60° Cone Seat, Female Solid and Port Connection (Washer / O-Ring) types, just like BSPP. This series of pages (M) includes 60° Cone Seat Female and Male Connectors as well as Metric Parallel Female Solid Connectors.

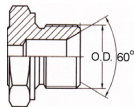
### Measurement Procedure

1. With calipers, measure the O.D. (outer diameter) of the Male threads or the I.D. (inner diameter) of the Female threads.
2. Check the thread pitch with the thread pitch gauges.
3. Check the cone seat angle (30° / 60°) with the seat angle gauge (for internal sealing– not port).
4. Compare measurements against chart.

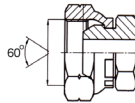
Dash Size	Thread Pitch	Male Thread O.D. (mm)	Female Thread I.D. (mm)
8	1.0	8	6.5
10	1.0	10	8.5
12A	1.0	12	10.5
12	1.5	12	10.5
14	1.5	14	12.5
16	1.5	16	14.5
18	1.5	18	16.5
20	1.5	20	18.5
22	1.5	22	20.5
24	1.5	24	22.5
26	1.5	26	24.5
27D	1.5	27	25.5
27	2.0	27	25.5
30D	1.5	30	28.5
30	2.0	30	28.5
33D	1.5	33	31.5
33	2.0	33	31.5
42	2.0	42	40.5
48	2.0	48	46.5
52	2.0	52	50.5
60	2.0	60	58.5



**Metric Parallel Female Solid**



**Metric Male 60° Seat**  
(For use with Parallel Female Solid, a seal must be used)



**Metric Female 60° Cone Seat**

### Contents of page series **M**

<b>Metric to Metric (60° Seat &amp; Female Solid)</b> .....	<b>M1</b>
<i>Converted to</i> ..... ○ NPT.....	<b>M3</b>
<i>Converted to</i> ..... ○ JIC.....	<b>M3</b>
<i>Converted to</i> ..... ○ ORFS.....	<b>M4</b>

## Metric Female Cap\* (60° Cone Seat)



Part Number	Metric
<b>0CM-12</b>	12x1.5
<b>0CM-14</b>	14x1.5
<b>0CM-16</b>	16x1.5
<b>0CM-18</b>	18x1.5
<b>0CM-20</b>	20x1.5
<b>0CM-22</b>	22x1.5

## Metric Male Plug\* (60° Cone Seat)



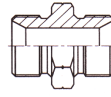
Part Number	Metric
<b>0PM-10</b>	10x1.0
<b>0PM-12</b>	12x1.5
<b>0PM-14</b>	14x1.5
<b>0PM-16</b>	16x1.5
<b>0PM-18</b>	18x1.5
<b>0PM-20</b>	20x1.5
<b>0PM-22</b>	22x1.5
<b>0PM-24</b>	24x1.5
<b>0PM-26</b>	26x1.5
<b>0PM-27D</b>	27x1.5
<b>0PM-30</b>	30x2.0
<b>0PM-30D</b>	30x1.5
<b>0PM-36D</b>	36x1.5
<b>0PM-38</b>	38x2.0
<b>0PM-38D</b>	38x1.5
<b>0PM-45</b>	45x2.0
<b>0PM-45D</b>	45x1.5
<b>0PM-52</b>	52x2.0
<b>0PM-52D</b>	52x1.5



For Port Version with Captive Seal  
see 0PHH (pg. H2)

\* For DIN 12° Seat Version see  
section "D"

## Metric Male Nipple\* (60° Cone Seats)



Part Number	Metric	Metric
<b>10MM-10-10</b>	10x1.0	10x1.0
<b>10MM-12-10</b>	12x1.5	10x1.0
<b>10MM-12-12</b>	12x1.5	12x1.5
<b>10MM-14-10</b>	14x1.5	10x1.0
<b>10MM-14-12</b>	14x1.5	12x1.5
<b>10MM-14-14</b>	14x1.5	14x1.5
<b>10MM-16-10</b>	16x1.5	10x1.0
<b>10MM-16-12</b>	16x1.5	12x1.5
<b>10MM-16-14</b>	16x1.5	14x1.5
<b>10MM-16-16</b>	16x1.5	16x1.5
<b>10MM-18-12</b>	18x1.5	12x1.5
<b>10MM-18-14</b>	18x1.5	14x1.5
<b>10MM-18-16</b>	18x1.5	16x1.5
<b>10MM-18-18</b>	18x1.5	18x1.5
<b>10MM-20-14</b>	20x1.5	14x1.5
<b>10MM-20-16</b>	20x1.5	16x1.5
<b>10MM-20-18</b>	20x1.5	18x1.5
<b>10MM-20-20</b>	20x1.5	20x1.5
<b>10MM-22-16</b>	22x1.5	16x1.5
<b>10MM-22-18</b>	22x1.5	18x1.5
<b>10MM-22-20</b>	22x1.5	20x1.5
<b>10MM-22-22</b>	22x1.5	22x1.5
<b>10MM-24-16</b>	24x1.5	16x1.5
<b>10MM-24-18</b>	24x1.5	18x1.5
<b>10MM-24-20</b>	24x1.5	20x1.5
<b>10MM-24-22</b>	24x1.5	22x1.5
<b>10MM-24-24</b>	24x1.5	24x1.5
<b>10MM-26-16</b>	26x1.5	16x1.5
<b>10MM-26-18</b>	26x1.5	18x1.5
<b>10MM-26-20</b>	26x1.5	20x1.5
<b>10MM-26-22</b>	26x1.5	22x1.5
<b>10MM-26-24</b>	26x1.5	24x1.5
<b>10MM-26-26</b>	26x1.5	26x1.5
<b>10MM-27-22</b>	27x2.0	22x1.5
<b>10MM-27-27</b>	27x2.0	27x2.0
<b>10MM-27D-22</b>	27x1.5	22x1.5

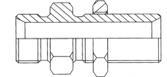
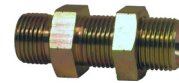
This series continued next column

10MM series continued from last column



Part Number	Metric	Metric
<b>10MM-27D-27D</b>	27x1.5	27x1.5
<b>10MM-30-26</b>	30x2.0	26x1.5
<b>10MM-30-30</b>	30x2.0	30x2.0
<b>10MM-30D-26</b>	30x1.5	26x1.5
<b>10MM-30D-30D</b>	30x1.5	30x1.5
<b>10MM-38-30</b>	38x2.0	30x2.0
<b>10MM-38-38</b>	38x2.0	38x2.0

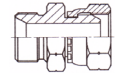
## Metric Male Bulkhead Nipple With Lock Nut\* (60° Cone Seats)



This series quoted upon request

Part Number	Metric	Metric
<b>60MM-12-12-LN</b>	12x1.5	12x1.5
<b>60MM-14-14-LN</b>	14x1.5	14x1.5
<b>60MM-16-16-LN</b>	16x1.5	16x1.5
<b>60MM-18-18-LN</b>	18x1.5	18x1.5
<b>60MM-20-20-LN</b>	20x1.5	20x1.5
<b>60MM-22-22-LN</b>	22x1.5	22x1.5
<b>60MM-24-24-LN</b>	24x1.5	24x1.5

## Metric Male to Metric Female Swivel (60° Cone Seats)\*



Part Number	Metric	Metric
<b>20MM-12-12</b>	12x1.5	12x1.5
<b>20MM-14-14</b>	14x1.5	14x1.5
<b>20MM-16-16</b>	16x1.5	16x1.5
<b>20MM-16-18</b>	16x1.5	18x1.5
<b>20MM-18-16</b>	18x1.5	16x1.5
<b>20MM-18-18</b>	18x1.5	18x1.5
<b>20MM-18-20</b>	18x1.5	20x1.5
<b>20MM-18-22</b>	18x1.5	22x1.5
<b>20MM-20-20</b>	20x1.5	20x1.5
<b>20MM-20-18</b>	20x1.5	18x1.5
<b>20MM-20-22</b>	20x1.5	22x1.5

20MM series continued next page

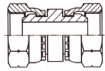
# Metric Parallel (60° Seat & Female Solid)



20MM series continued from last column

Part Number	Metric	Metric
<b>20MM-22-18</b>	22x1.5	18x1.5
<b>20MM-22-20</b>	22x1.5	20x1.5
<b>20MM-22-22</b>	22x1.5	22x1.5
<b>20MM-27-27</b>	27x2.0	27x2.0
<b>20MM-27D-27D</b>	27x1.5	27x1.5
<b>20MM-30-30</b>	30x2.0	30x2.0
<b>20MM-30D-30D</b>	30x1.5	30x1.5

## Metric Female Swivel Union\*



*This series quoted upon request*

Part Number	Metric	Metric
<b>30MM-12-12</b>	12x1.5	12x1.5
<b>30MM-14-14</b>	14x1.5	14x1.5
<b>30MM-16-16</b>	16x1.5	16x1.5
<b>30MM-18-18</b>	18x1.5	18x1.5
<b>30MM-20-18</b>	20x1.5	18x1.5
<b>30MM-20-20</b>	20x1.5	20x1.5
<b>30MM-22-18</b>	22x1.5	18x1.5
<b>30MM-22-20</b>	22x1.5	20x1.5
<b>30MM-22-22</b>	22x1.5	22x1.5

## Metric Male to Female Solid\*



Part Number	Metric	Metric
<b>50MM-14-14</b>	14x1.5	14x1.5
<b>50MM-14-16</b>	14x1.5	16x1.5
<b>50MM-16-12</b>	16x1.5	12x1.5
<b>50MM-16-18</b>	16x1.5	18x1.5
<b>50MM-16-20</b>	16x1.5	20x1.5
<b>50MM-16-22</b>	16x1.5	22x1.5
<b>50MM-22-16</b>	22x1.5	16x1.5
<b>50MM-24-18</b>	24x1.5	18x1.5

## Metric Female Solid Coupling



Part Number	Metric	Metric
<b>70MM-12-12</b>	12x1.5	12x1.5
<b>70MM-14-14</b>	14x1.5	14x1.5
<b>70MM-16-12</b>	16x1.5	12x1.5
<b>70MM-16-16</b>	16x1.5	16x1.5
<b>70MM-18-18</b>	18x1.5	18x1.5
<b>70MM-20-20</b>	20x1.5	20x1.5
<b>70MM-22-16</b>	22x1.5	16x1.5
<b>70MM-22-22</b>	22x1.5	22x1.5

## Metric Male to Female NPT Solid



Part Number	Metric	NPT
<b>50MN-16-02</b>	16x1.5	1/8-27
<b>50MN-16-04</b>	16x1.5	1/4-18
<b>50MN-20-06</b>	20x1.5	3/8-18
<b>50MN-22-08</b>	22x1.5	1/2-14
<b>50MN-26-08</b>	26x1.5	1/2-14
<b>50MN-26-12</b>	26x1.5	3/4-14

 *For Port Version (Washer / O-Ring)  
See 50HN (pg. H2)*

## NPT Female to Metric Female Solid Coupling



Part Number	NPT	Metric
<b>70NM-04-12</b>	1/4-18	12x1.5
<b>70NM-04-14</b>	1/4-18	14x1.5
<b>70NM-04-16</b>	1/4-18	16x1.5


*\* For DIN 12° Seat Version see section "D"*

## JIC Male to Metric Male\*



Part Number	JIC	Metric
<b>10JM-04-10</b>	7/16-20	10x1.0
<b>10JM-04-12</b>	7/16-20	12x1.5
<b>10JM-04-14</b>	7/16-20	14x1.5
<b>10JM-05-10</b>	1/2-20	10x1.5
<b>10JM-05-12</b>	1/2-20	12x1.5
<b>10JM-05-14</b>	1/2-20	14x1.5
<b>10JM-06-10</b>	9/16-18	10x1.0
<b>10JM-06-12</b>	9/16-18	12x1.5
<b>10JM-06-14</b>	9/16-18	14x1.5
<b>10JM-06-16</b>	9/16-18	16x1.5
<b>10JM-06-18</b>	9/16-18	18x1.5
<b>10JM-06-20</b>	9/16-18	20x1.5
<b>10JM-06-22</b>	9/16-18	22x1.5
<b>10JM-08-12</b>	3/4-16	12x1.5
<b>10JM-08-14</b>	3/4-16	14x1.5
<b>10JM-08-16</b>	3/4-16	16x1.5
<b>10JM-08-18</b>	3/4-16	18x1.5
<b>10JM-08-20</b>	3/4-16	20x1.5
<b>10JM-08-22</b>	3/4-16	22x1.5
<b>10JM-10-16</b>	7/8-14	16x1.5
<b>10JM-10-18</b>	7/8-14	18x1.5
<b>10JM-10-20</b>	7/8-14	20x1.5
<b>10JM-10-22</b>	7/8-14	22x1.5
<b>10JM-10-26</b>	7/8-14	26x1.5
<b>10JM-12-20</b>	1 1/16-12	20x1.5
<b>10JM-12-22</b>	1 1/16-12	22x1.5
<b>10JM-12-26</b>	1 1/16-12	26x1.5
<b>10JM-12-30</b>	1 1/16-12	30x2.0
<b>10JM-12-30D</b>	1 1/16-12	30x1.5
<b>10JM-12-33</b>	1 1/16-12	30x2.0
<b>10JM-12-33D</b>	1 1/16-12	33x1.5
<b>10JM-12-36D</b>	1 1/16-12	36x1.5
<b>10JM-16-20</b>	1 5/16-12	20x1.5
<b>10JM-16-22</b>	1 5/16-12	22x1.5
<b>10JM-16-26</b>	1 5/16-12	26x1.5
<b>10JM-16-27</b>	1 5/16-12	27x2.0

*10JM series continued next page*

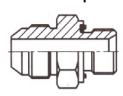
 *For Port Version (Washer / O-Ring)  
see 10JH (pg. H2)*

10JM series continued from last page



Part Number	JIC	Metric
10JM-16-27D	15/16-12	27x1.5
10JM-16-30	15/16-12	30x2.0
10JM-16-30D	15/16-12	30x1.5
10JM-16-36D	15/16-12	36x1.5
10JM-16-45D	15/16-12	45x1.5
10JM-20-38	15/16-12	38x2.0
10JM-20-45	15/8-12	45x2.0
10JM-20-45D	15/8-12	45x1.5
10JM-24-45	17/8-12	45x1.5
10JM-24-52	17/8-12	52x2.0
10JM-24-52D	17/8-12	52x1.5

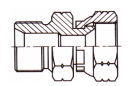
**JIC Male to  
Metric Dual Purpose Male**  
(60° Seat / Captive Seal)



*This series quoted upon request*

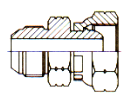
Part Number	JIC	Metric
10JM-04-10WD	7/16-20	10x1.0
10JM-04-12WD	7/16-20	12x1.5
10JM-06-14WD	9/16-18	14x1.5
10JM-06-18WD	9/16-18	18x1.5
10JM-08-14WD	3/4-16	14x1.5
10JM-08-16WD	3/4-16	16x1.5
10JM-08-18WD	3/4-16	18x1.5
10JM-08-20WD	3/4-16	20x1.5
10JM-08-22WD	3/4-16	22x1.5
10JM-10-20WD	7/8-14	20x1.5
10JM-10-22WD	7/8-14	22x1.5
10JM-12-22WD	11/16-12	22x1.5
10JM-12-26WD	11/16-12	26x1.5
10JM-12-27WD	11/16-12	27x2.0
10JM-16-33WD	15/16-12	33x2.0
10JM-20-42WD	15/8-12	42x2.0
10JM-20-48WD	15/8-12	48x2.0
10JM-24-48WD	17/8-12	48x2.0

## Metric Male to Female JIC Swivel



Part Number	Metric	JIC
20MJ-10-04	10x1.0	7/16-20
20MJ-12-05	12x1.5	1/2-20
20MJ-14-06	14x1.5	9/16-18
20MJ-16-08	16x1.5	3/4-16
20MJ-18-08	18x1.5	3/4-16
20MJ-18-10	18x1.5	7/8-14
20MJ-22-10	22x1.5	7/8-14
20MJ-27-12	27x2.0	11/16-12
20MJ-27D-12	27x1.5	11/16-12
20MJ-30-16	30x2.0	15/16-12
20MJ-30D-16	30x1.5	15/16-12
20MJ-45-20	45x2.0	15/8-12
20MJ-45D-20	45x1.5	15/8-12
20MJ-52-24	52x2.0	17/8-12
20MJ-52D-24	52x1.5	17/8-12

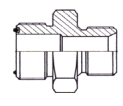
## JIC Male to Metric Female Swivel \*



*This series quoted upon request*

Part Number	JIC	Metric
20JM-05-12	1/2-20	12x1.5
20JM-06-14	9/16-18	14x1.5
20JM-06-16	9/16-18	16x1.5
20JM-06-18	9/16-18	18x1.5
20JM-06-20	9/16-18	20x1.5
20JM-06-22	9/16-18	22x1.5
20JM-08-16	3/4-16	16x1.5
20JM-08-18	3/4-16	18x1.5
20JM-08-20	3/4-16	20x1.5
20JM-08-22	3/4-16	22x1.5
20JM-10-16	7/8-14	16x1.5
20JM-10-18	7/8-14	18x1.5
20JM-10-20	7/8-14	20x1.5
20JM-10-22	7/8-14	22x1.5

## ORS Male to Metric Male\*



*This series quoted upon request*

Part Number	JIC	Metric
10FM-04-10	7/16-20	10x1.0
10FM-04-12	7/16-20	12x1.5
10FM-04-14	7/16-20	14x1.5
10FM-06-12	9/16-18	12x1.5
10FM-06-14	9/16-18	14x1.5
10FM-06-16	9/16-18	16x1.5
10FM-06-18	9/16-18	18x1.5
10FM-08-16	3/4-16	16x1.5
10FM-08-18	3/4-16	18x1.5
10FM-08-22	3/4-16	22x1.5
10FM-10-20	7/8-14	20x1.5
10FM-10-22	7/8-14	22x1.5
10FM-12-18	11/16-12	18x1.5
10FM-12-22	11/16-12	22x1.5
10FM-16-27	15/16-12	27x2.0
10FM-16-33	15/16-12	22x2.0
10FM-20-42	15/8-12	42x2.0
10FM-24-48	17/8-12	48x2.0



\* For Metric Port Thread Version  
(Washer / O-Ring) See **10FH** (pg. H7)

\* For DIN 12° Seat Version see  
section "D"