

BMS 05 - ASME B16.47 Series A Dimensional Tables & Tolerances  
 (All Class Ratings)  
 (Formerly MSS SP44)

Issued by: A D Senior

Date: 1st Jan 2011

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## Class 150 LB Rated - Dimensions are in Millimetres

NOM BORE INCHES	CENTERING RING		SEALING ELEMENT		INNER RING	
	OD	ID	OD	ID	OD	ID
	mm	mm	mm	mm	mm	mm
	<b>d4</b>		<b>d3</b>	<b>d2</b>		<b>d1</b>
26	774.7	703.3	704.9	673.1	674.6	654.1
28	831.9	754.1	755.7	723.9	725.4	704.9
30	882.7	804.9	806.5	774.7	776.2	755.7
32	939.8	859.0	860.6	825.5	827.0	806.5
34	990.6	909.8	911.4	876.3	877.8	857.3
36	1047.8	967.0	968.5	927.1	928.6	908.1
38	1111.3	1017.8	1019.3	977.9	979.4	958.9
40	1162.1	1068.6	1070.1	1028.7	1030.2	1009.7
42	1219.2	1124.4	1124.0	1079.5	1081.0	1060.5
44	1276.4	1177.0	1178.1	1130.3	1131.8	1111.3
46	1327.2	1227.3	1228.9	1181.1	1182.6	1162.1
48	1384.3	1278.1	1279.7	1231.9	1233.4	1212.9
50	1435.1	1332.0	1333.5	1282.7	1284.2	1263.7
52	1492.3	1382.8	1384.3	1333.5	1335.0	1314.5
54	1549.4	1433.6	1435.1	1384.3	1385.8	1358.9
56	1606.6	1484.4	1485.9	1435.1	1436.6	1409.7
58	1663.7	1535.2	1536.7	1485.9	1487.4	1460.5
60	1714.5	1586.0	1587.5	1536.7	1538.2	1511.3

## Note:

Sales "must" confirm initial thickness for all gaskets above 1 Metre in diameter.  
 All gaskets above 50" Nominal Bore are recommended to be a thickness of either 6.4mm or 7.2mm.

## Class 300 LB Rated - Dimensions are in Millimetres

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NOM BORE INCHES	CENTERING RING		SEALING ELEMENT		INNER RING	
	OD	ID	OD	ID	OD	ID
	mm	mm	mm	mm	mm	mm
	<b>d4</b>		<b>d3</b>	<b>d2</b>		<b>d1</b>
26	835.2	735.1	736.6	685.8	687.3	654.1
28	898.7	785.9	787.4	736.6	738.1	704.9
30	952.5	843.0	844.6	793.8	795.2	755.7
32	1006.6	900.2	901.7	850.9	852.4	806.5
34	1057.4	951.0	952.5	901.7	903.2	857.3
36	1117.6	1005.1	1006.6	955.8	957.3	908.1
38	1054.1	1014.5	1016.0	977.9	979.4	952.5
40	1114.6	1068.6	1070.1	1022.4	1023.8	1003.3
42	1165.4	1119.4	1120.9	1073.2	1074.6	1054.1
44	1219.2	1179.6	1181.1	1130.3	1131.8	1104.9
46	1273.3	1227.3	1228.9	1178.1	1179.5	1152.7
48	1324.1	1284.5	1286.0	1235.2	1236.7	1209.8
50	1378.0	1344.7	1346.2	1295.4	1296.9	1244.6
52	1428.8	1395.5	1397.0	1346.2	1347.7	1320.8
54	1492.3	1452.6	1454.2	1403.4	1404.8	1352.6
56	1543.1	1503.4	1505.0	1454.2	1455.6	1403.4
58	1593.9	1560.6	1562.1	1511.3	1512.8	1447.8
60	1644.7	1611.4	1612.9	1562.1	1563.6	1524.0

Note:

Sales "must" confirm initial thickness for all gaskets above 1 Metre in diameter.  
 All gaskets above 50" Nominal Bore are recommended to be a thickness of either 6.4mm or 7.2mm.

Class 400 LB Rated - Dimensions are in Millimetres

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NOM BORE INCHES	CENTERING RING		SEALING ELEMENT		INNER RING	
	OD	ID	OD	ID	OD	ID
	mm	mm	mm	mm	mm	mm
	<b>d4</b>		<b>d3</b>	<b>d2</b>		<b>d1</b>
26	831.9	735.1	736.6	685.8	687.3	660.4
28	892.3	785.9	787.4	736.6	738.1	711.2
30	946.2	843.0	844.6	793.8	795.2	755.7
32	1003.3	900.2	901.7	850.9	852.4	812.8
34	1054.1	951.0	952.5	901.7	903.2	863.6
36	1117.6	1005.1	1006.6	955.8	957.3	917.7
38	1073.2	1020.8	1022.4	971.6	973.0	952.5
40	1127.3	1074.9	1076.5	1025.7	1027.1	1000.3
42	1178.1	1125.7	1127.3	1076.5	1077.9	1051.1
44	1231.9	1179.6	1181.1	1130.3	1131.8	1104.9
46	1289.1	1243.1	1244.6	1193.8	1195.3	1168.4
48	1346.2	1293.9	1295.4	1244.6	1246.1	1206.5
50	1403.4	1344.7	1346.2	1295.4	1296.9	1257.3
52	1454.2	1395.5	1397.0	1346.2	1347.7	1308.1
54	1517.7	1452.6	1454.2	1403.4	1404.8	1352.6
56	1568.5	1503.4	1505.0	1454.2	1455.6	1403.4
58	1619.3	1554.2	1555.8	1505.0	1506.4	1454.2
60	1682.8	1617.7	1619.3	1568.5	1569.9	1517.7

Note:

Sales "must" confirm initial thickness for all gaskets above 1 Metre in diameter.  
 All gaskets above 50" Nominal Bore are recommended to be a thickness of either 6.4mm or 7.2mm

Class 600 LB Rated - Dimensions are in Millimetres

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NOM BORE INCHES	CENTERING RING		SEALING ELEMENT		INNER RING	
	OD	ID	OD	ID	OD	ID
	mm	mm	mm	mm	mm	mm
	<b>d4</b>		<b>d3</b>	<b>d2</b>		<b>d1</b>
26	866.9	735.1	736.6	685.8	687.3	647.7
28	914.4	785.9	787.4	736.6	738.1	698.5
30	971.6	843.0	844.6	793.8	795.2	755.7
32	1022.4	900.2	901.7	850.9	852.4	812.8
34	1073.2	951.0	952.5	901.7	903.2	863.6
36	1130.3	1005.1	1006.6	955.8	957.3	917.7
38	1104.9	1039.9	1041.4	990.6	992.1	952.5
40	1155.7	1097.0	1098.6	1047.8	1049.2	1009.7
42	1219.2	1154.2	1155.7	1104.9	1106.4	1066.8
44	1270.0	1211.3	1212.9	1162.1	1163.5	1111.3
46	1327.2	1262.1	1263.7	1212.9	1214.3	1162.1
48	1390.7	1319.3	1320.8	1270.0	1271.5	1219.2
50	1447.8	1370.1	1371.6	1320.8	1322.3	1270.0
52	1498.6	1420.9	1422.4	1371.6	1373.1	1320.8
54	1555.8	1478.0	1479.6	1428.8	1430.2	1378.0
56	1612.9	1528.8	1530.4	1479.6	1481.0	1428.8
58	1663.7	1586.0	1587.5	1536.7	1538.2	1473.2
60	1733.6	1643.1	1644.7	1593.9	1595.3	1530.4

Note:

Sales "must" confirm initial thickness for all gaskets above 1 Metre in diameter.  
 All gaskets above 50" Nominal Bore are recommended to be a thickness of either 6.4mm or 7.2mm

Class 900 LB Rated - Dimensions are in Millimetres

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NOM BORE INCHES	CENTERING RING		SEALING ELEMENT		INNER RING	
	OD	ID	OD	ID	OD	ID
	mm	mm	mm	mm	mm	mm
	<b>d4</b>		<b>d3</b>	<b>d2</b>		<b>d1</b>
26	882.7	735.1	736.6	685.8	687.3	660.4
28	946.2	785.9	787.4	736.6	738.1	711.2
30	1009.7	843.0	844.6	793.8	795.2	768.4
32	1073.2	900.2	901.7	850.9	852.4	812.8
34	1136.7	951.0	952.5	901.7	903.2	863.6
36	1200.2	1008.1	1009.7	958.9	960.3	920.8
38	1200.2	1084.3	1085.9	1035.1	1036.5	1009.7
40	1251.0	1147.8	1149.4	1098.6	1100.0	1060.5
42	1301.8	1198.6	1200.2	1149.4	1150.8	1111.3
44	1368.6	1255.8	1257.3	1206.5	1208.0	1155.7
46	1435.1	1319.3	1320.8	1270.0	1271.5	1219.2
48	1485.9	1370.1	1371.6	1320.8	1322.3	1270.0

**Note:**

Sales "must" confirm initial thickness for all gaskets above 1 Metre in diameter.

All gaskets above 50" Nominal Bore are recommended to be a thickness of either 6.4mm or 7.2mm

Tolerances - ASME B16.47 Series A - In Millimetres

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	CENTERING RING			SEALING ELEMENT			INNER RING		
	O/D	I/D	THK	O/D	I/D	THK	O/D	I/D	THK
26" - 34" NPS	+ 0.76 - 0.76	* F	2.97 to 3.32	+ 1.52 - 1.52	+ 0.76 - 0.76	4.5 + 0.13 4.5 - 0.13	* G	+ 3.04 - 3.04	2.97 to 3.32
36" - 60" NPS	+ 0.76 - 0.76	* F	2.97 to 3.32	+ 1.52 - 1.52	+ 1.27 - 1.27	4.5 + 0.13 4.5 - 0.13	* H	+ 3.04 - 3.04	

- \* F External guide ring inside diameter tolerance not stated in ASME B16.47. Standard practice is to use same tolerance as given for inside diameter of sealing element + / - 1.52.
- \* G Internal guide ring outside diameter tolerance not stated in ASME B16.47. Standard practice is to use same tolerance as given for inside diameter of sealing element + / - 0.76mm.
- \* H Internal guide ring outside diameter tolerance not stated in ASME B16.47. Standard practice is to use same tolerance as given for inside diameter of sealing element + / - 1.27mm.