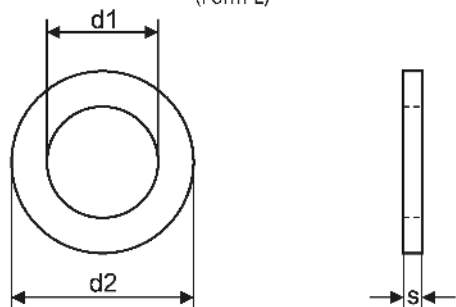


# Plain Washers

## BS 4320 Metric Series

Table 3: Black washers - Normal diameter series  
(Form E)



### BS 4320 Dimensions of washers (Forms E)

Nominal size of bolt or screw	Inside diameter d1			Outside diameter d2			Thickness s		
	nom.	max.	min.	nom.	max.	min.	nom.	max.	min.
M5	5.5	5.8	5.5	10.0	10.0	9.2	1.0	1.2	0.8
M6	6.6	7.0	6.6	12.5	12.5	11.7	1.6	1.9	1.3
M8	9.0	9.4	9.0	17.0	17.0	16.2	1.6	1.9	1.3
M10	11.0	11.5	11.0	21.0	21.0	20.2	2.0	2.3	1.7
M12	14.0	14.5	14.0	24.0	24.0	23.2	2.5	2.8	2.2
(M14)	16.0	16.5	16.0	28.0	28.0	27.2	2.5	2.8	2.2
M16	18.0	18.5	18.0	30.0	30.0	29.2	3.0	3.6	2.4
(M18)	20.0	20.6	20.0	34.0	34.0	32.8	3.0	3.6	2.4
M20	22.0	22.6	22.0	37.0	37.0	35.8	3.0	3.6	2.4
(M22)	24.0	24.6	24.0	39.0	39.0	37.8	3.0	3.6	2.4
M24	26.0	26.6	26.0	44.0	44.0	42.8	4.0	4.6	3.4
(M27)	30.0	30.6	30.0	50.0	50.0	48.8	4.0	4.6	3.4
M30	33.0	33.8	33.0	56.0	56.0	54.5	4.0	4.6	3.4
(M33)	36.0	36.8	36.0	60.0	60.0	58.5	5.0	6.0	4.0
M36	39.0	39.8	39.0	66.0	66.0	64.5	5.0	6.0	4.0
(M39)	42.0	42.8	42.0	72.0	72.0	70.5	6.0	7.0	5.0
M42	45.0	45.8	45.0	78.0	78.0	76.5	7.0	8.2	5.8
(M45)	48.0	48.8	48.0	85.0	85.0	83.0	7.0	8.2	5.8
M48	52.0	53.0	52.0	92.0	92.0	90.0	8.0	9.2	6.8
(M52)	56.0	57.0	56.0	98.0	98.0	96.0	8.0	9.2	6.8
M56	62.0	63.0	62.0	105.0	105.0	103.0	9.0	10.2	7.8
(M60)	66.0	67.0	66.0	110.0	110.0	108.0	9.0	10.2	7.8
M64	70.0	71.0	70.0	115.0	115.0	113.0	9.0	10.2	7.8
(M68)	74.0	75.0	74.0	120.0	120.0	118.0	10.0	11.2	8.8