

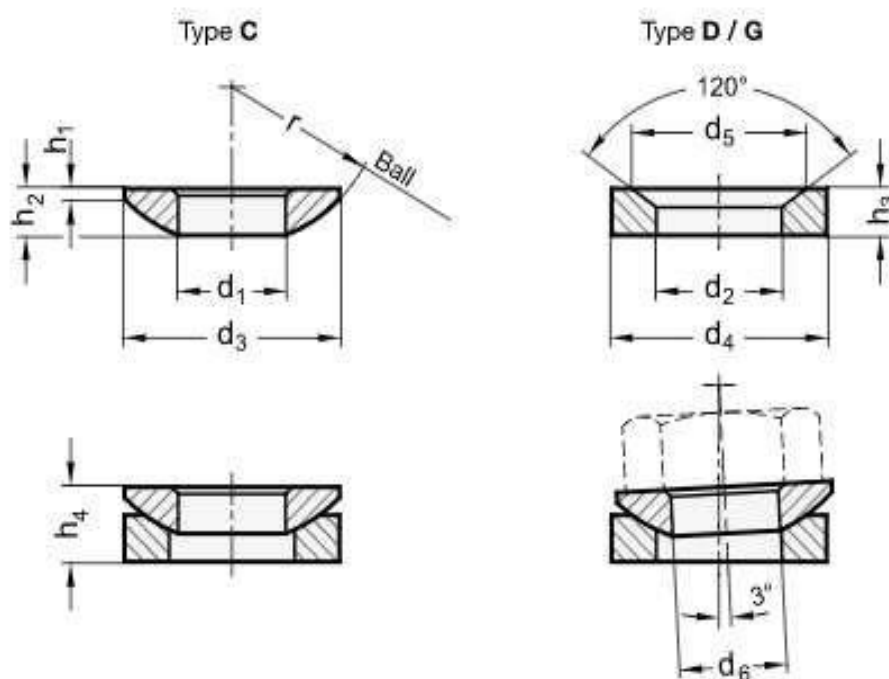


## Product Dimensions and Weights

## DIN 6319 Specifications

### Metric DIN 6319 Spherical Washers

Visit our [online store](#) for product availability



#### Types

Type **C** – Male

Type **D** - Female with  $d_4 = d_3$

Type **G** - Female with  $d_4 > d_3$



## Dimensions of Metric DIN 6319 Spherical Washers

Thread size d6	d <sub>1</sub> /d <sub>2</sub>	Type	d <sub>3</sub> / d <sub>4</sub>	d <sub>5</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	h <sub>4</sub>	r	Transferable Static Bolt Force in kN max.	Weight (kg)
M6	6.4	C	12	11	0.7	2.3	2.8	~	9	9	0.001
M6	7.1	D	12	11	0.7	2.3	2.8	4.2	9	9	0.002
M6	7.1	G	17	11	0.7	2.3	4	~	9	9	0.006
M8	8.4	C	17	14.5	0.6	3.2	3.5	~	12	17	0.003
M8	9.6	D	17	14.5	0.6	3.2	3.5	5.6	12	17	0.004
M8	9.6	G	24	14.5	0.6	3.2	5	~	12	17	0.015
M10	10.5	C	21	18.5	0.8	4	4.2	~	15	26	0.006
M10	12	D	21	18.5	0.8	4	4.2	6.5	15	26	0.006
M10	12	G	30	18.5	0.8	4	5	~	15	26	0.02
M12	13	C	24	20	1.1	4.6	5	~	17	38	0.002
M12	14.2	D	24	20	1.1	4.6	5	8	17	38	0.01
M12	14.2	G	36	20	1.1	4.6	6	~	17	38	0.039
M14	15	C	28	24.8	1.2	5	5.6	~	22	53	0.01
M14	16.5	D	28	24.8	1.2	5	5.6	8.5	22	53	0.014
M16	17	C	30	26	1.3	5.3	6.2	~	22	73	0.012
M16	19	D	30	26	1.3	5.3	6.2	9.6	22	73	0.017
M16	19	G	44	26	1.3	5.3	7	~	22	73	0.065
M20	21	C	36	31	2	6.3	7.5	~	27	117	0.022
M20	23.2	D	36	31	2	6.3	7.5	11.7	27	117	0.031
M20	23.2	G	50	31	2	6.3	8	~	27	117	0.09
M24	25	C	44	37	2.4	8.2	9.5	~	32	168	0.045
M24	28	D	44	37	2.4	8.2	9.5	15.2	32	168	0.061
M24	28	G	60	37	2.4	8.2	10	~	32	168	0.162
M30	31	C	56	49	3.6	11.2	12	~	41	269	0.107
M30	35	D	56	49	3.6	11.2	12	19.2	41	269	0.12
M30	35	G	68	49	3.6	11.2	12	~	41	269	0.235
M36	37	C	68	60	4.6	14	15	~	50	394	0.18
M36	42	D	68	60	4.6	14	15	23.5	50	394	0.25
M42	43	C	78	70	6.5	17	18	~	58	542	0.318

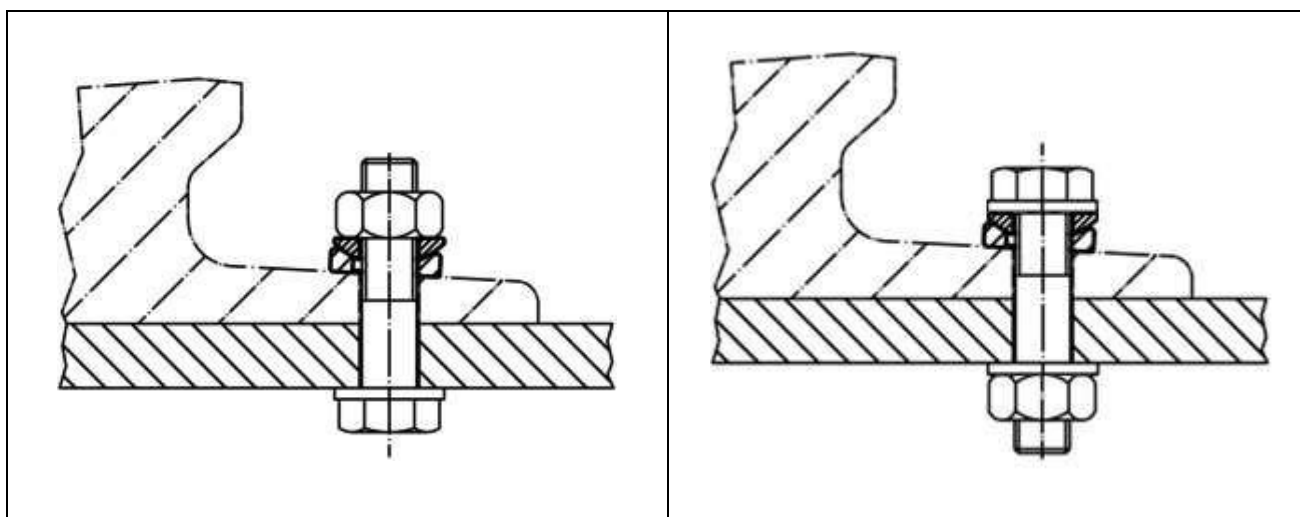


M42	49	D	78	70	6.5	17	18	29	58	542	0.36
M48	50	C	92	82	8	21	22	~	67	714	0.54
M48	56	D	92	82	8	21	22	35.5	67	714	0.64

All measurements are in mm

Metric DIN 6319 are Spherical Washers (Type C), and conical seat washers (Type D) also known as Spherical Washer Sets, Self-Aligning Washers or Equalizing Washers. They can be used individually but most often as an assembly for applications where clamping surfaces are not lying parallel to one another or on uneven surfaces. The washer assembly consists of a "top" half that is convex (male) and a "bottom" half that is concave (female). The top washer has a slightly narrower ID than the bottom washer while both have the same radius. This enables a bolt or screw to pass through both washers and automatically adjust / self-align to compensate for any angular deviation between the clamping surfaces. The spherical washer sets are designed to allow for an approximately 3 degree angle of correction. Any slight angular deviations can be equalized when used together with DIN 6330 hex nut with spherical setting. In this case, the male washer (Type C) is redundant. Unique Fasteners offers over 500.000 unique fastener products from stock in inch and metric standard in a variety of materials and finishes. The following sizes metric DIN 5406 External Tooth Shaft Lock Washer with Tab are available for immediate shipping from stock: Diameters range from M6 to M48 in plain steel.

### Examples of Arrangements for Metric DIN 6319 Spherical Washers



DIN (Deutsches Institut für Normung - German Institute for Standardization) standards are issued for a variety of components including industrial fasteners as metric DIN 6319 Spherical Washers. The DIN standards remain common in Germany, Europe and globally even though the transition to ISO standards is taking place. DIN standards continue to be used for parts which do not have ISO equivalents or for which there is no need for standardization.