



PARTS CATALOGUE 2026

Washers, Push Nuts & Precision Stampings

Over 500 designs in regular production at our Faridabad plant, from Ø2 push nuts in 0.25 mm stainless to 3 mm CRCA washers, with zinc plating in our own barrel facility.

Push nuts

Our specialist line

Washers

Flat, wave and cap-spring

Spring washers

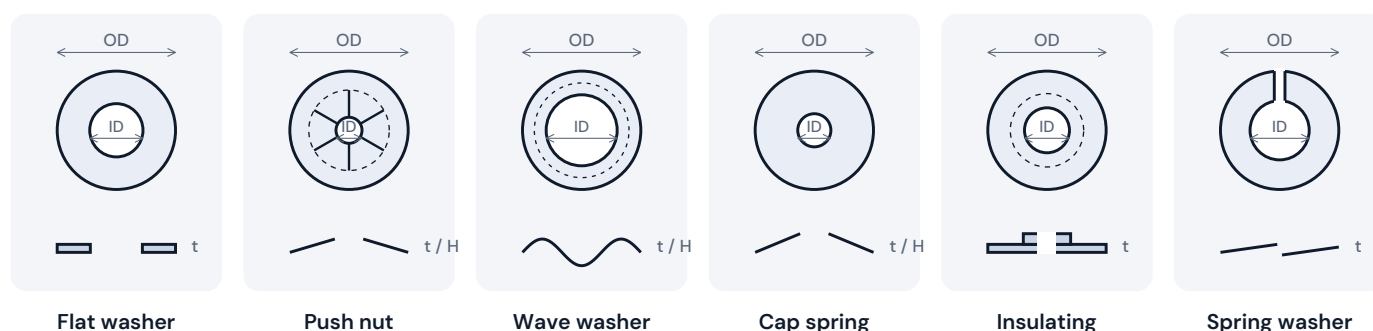
Now in production, M3–M12

The range at a glance

Every part below is **made to the customer's drawing** on our own progressive and compound tools. The sizes are from parts we make today, not the limits of the plant. If your part is close to a range, send the drawing.

Family	Designs	Size (OD)	Thickness, mm	Materials
Flat washers & spacers	340+	Ø3.5–52	0.2–3.15	CRCA, spring steel, SS, brass, Al
Push nuts & lock washers	10+	Ø6–24.5	0.2–0.4	SUS 301/304, spring steel, PB
Spring (split) washers	M3–M12	Ø6.2–21.1	0.8–2.5	Spring steel, DIN 127 B
Wave washers	7	Ø9.3–21	0.2–0.5	EN42J spring steel, SUS 301
Cap-spring / disc washers	11	Ø15.4–25	0.15–1.0	SUS 304, EN42J, phosphor bronze
Insulating washers & tabs	45+	Ø3.5–14	0.8–2.5	Glass epoxy, bakelite, fibre
Terminals & contacts	20	Ø4.3–26	0.15–1.0	Brass, phosphor bronze
Gaskets	7	Ø66–92	0.25–0.4	Leatheroid / gasket paper
Brackets, covers & pressings	60+	to drawing	0.8–3.15	CRCA, SS, spring steel

PART STYLES



WHAT THE PLANT CAN DO

Ø2

Smallest push-nut shaft

0.15–3.15

Strip thickness, mm

10

Material groups

HRC 40–50

Spring parts, tested in-house

Push nuts & lock washers



Push nuts hold a part on a plain shaft without a thread or a groove. They are pressed on, and the prongs bite into the shaft. We make them in **0.25 mm stainless steel** and **spring steel**, hardened to **HRC 40–50**, on progressive tools with multi-cavity strips.

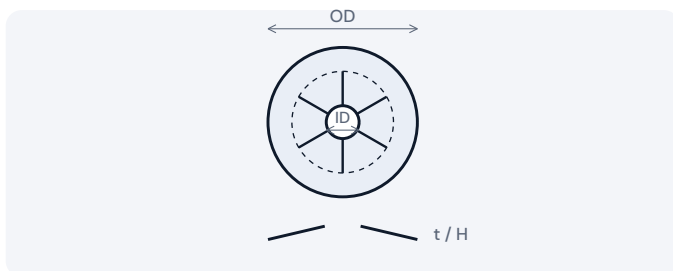
Our current designs are built to **Japanese instrument-cluster drawings** and approved through **PPAP**. They are made to the same drawing as the Japanese original, so they can replace imported parts.

REFERENCE DESIGNS IN PRODUCTION

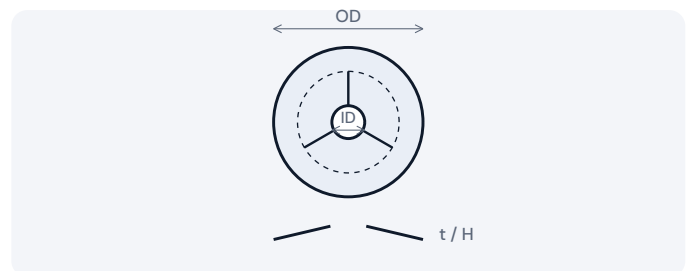
Style	Shaft	OD	Thickness	Height	Material	Hardness	Status
Push nut, 4 prongs	Ø2.0	Ø6.0 +0.2	0.25 ±0.025	0.70 ref	SUS 301 / S65C-M	HRC 40–50	PPAP
Push nut, 6 prongs	Ø2.0	Ø6.0 +0.2	0.25 ±0.025	0.70 ref	SUS 301 / S65C-M	HRC 40–50	PPAP
Push nut	Ø2.6	Ø7.0 +0.2	0.25 ±0.025	0.85 ref	SUS 304	HRC 40–50	PPAP
Lock washer, 3 prongs @120°	Ø2.3	Ø7.0 ±0.2	0.25 ±0.025	0.85 ref	SUS 301 / 304	n/a	Sampling
Lock washer, lever	Ø10.6	Ø24.5 ±0.2	0.30 ±0.02	1.80 +0.2	EN42J spring steel	Hardened	Regular
Push-on nut (panel)	to drawing	to drawing	0.40	n/a	Spring steel	Hardened	Regular

WHAT WE CAN QUOTE

- Shaft sizes from **Ø2** upward; new sizes need a new progressive tool.
- **3, 4 or 6 prongs**, flat or domed, with the **inscribed circle held to minimum** as Japanese drawings require.
- Stainless steel **SUS 301 / 304** in 0.25–0.3 mm; **spring steel** (S65C-M, EN42J, C80) in 0.3–0.4 mm, hardened and tempered.
- Hardness checked on our own tester, and dimensions on a profile projector and a vision measuring machine for each lot.
- Samples, PPAP, and ongoing inspection records are available on request.



Push nut, 6 prongs



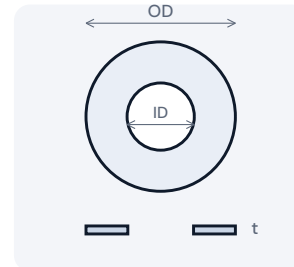
Lock washer, 3 prongs

Heights marked "ref" are reference values from the drawing. Status: PPAP = approved for production; Sampling = samples being approved; Regular = in series supply.

Flat washers & spacers



Flat washers are our largest family. Most are made from **CRCA** between 0.5 and 2 mm and zinc plated in-house. We also make them in spring steel, stainless steel, brass, aluminium and non-metallic sheet.



Shapes: plain round, D-shaped and keyed bores, bobbin and diaphragm washers, and resonator washers for horns.

SIZE BANDS (DESIGNS IN PRODUCTION)

OD band	ID range	Thickness, mm	Designs	Typical material
up to Ø10	Ø1.8–6.5	0.3–1.6	67	CRCA, aluminium, bakelite
Ø10–16	Ø3.2–10.3	0.2–3.0	73	CRCA
Ø16–25	Ø5.1–20.8	0.2–2.0	49	CRCA, spring steel
Ø25–40	Ø10.5–26.5	0.2–3.0	9	CRCA, brass, aluminium
over Ø40	to drawing	1.0–1.2	3	Fibre, CRCA

THICKNESS SPREAD

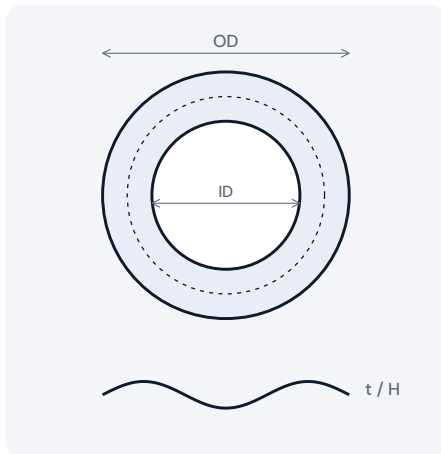


TYPICAL TOLERANCES HELD

Feature	Tolerance
Outside diameter	±0.1 to ±0.2 typical
Inside diameter / bore	+0.1 typical, to +0.05
Thickness (strip)	±0.02 to ±0.05
Push-nut thickness	±0.025 on 0.25 SS
Hardness (spring parts)	HRC 40–50, tested in-house

Size bands group the in-house flat washers that have dimensions recorded in the Components Master (201 of 346 designs). Other washers are made to drawing within the same ranges.

Spring washers: wave, cap and split

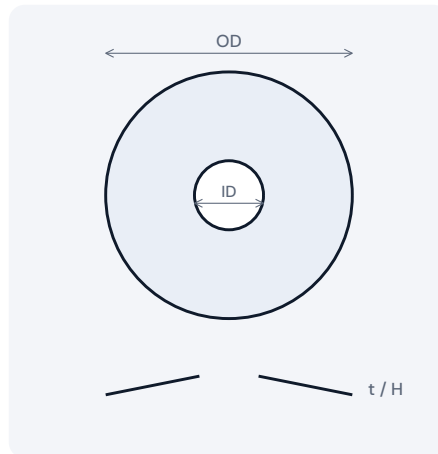


IN PRODUCTION

Wave washers

Spring steel strip, wavy in section. Takes up axial play and adds preload in switches and dimmers.

OD	Ø9.3–21
ID	Ø5.9–10.5
Thickness	0.2–0.5
Free height	1.5
Material	EN42J blued, SUS 301
Finish	Blued, zinc black

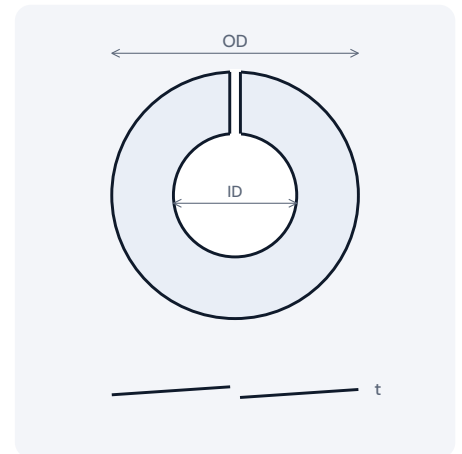


IN PRODUCTION

Cap-spring / disc washers

Dished (Belleville-type) springs for horns and acoustic parts. Made in stainless steel, spring steel or phosphor bronze.

OD	Ø15.4–25
ID	Ø5.1–6.2
Thickness	0.2–0.5
Tolerance	$t \pm 0.02-0.05$
Material	SUS 304, EN42J, PB
Finish	Self-colour, blued



IN PRODUCTION

Spring (split) washers

Helical split lock washers, cut and coiled in-house from spring-steel wire, then hardened and plated.

Sizes	M3–M12
Standard	DIN 127 B / IS 3063
Thickness	0.8–2.5
Material	Spring steel wire
Finish	Zinc plated in-house
Specials	To drawing

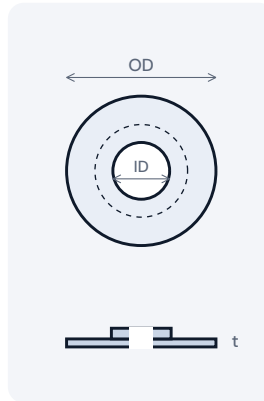
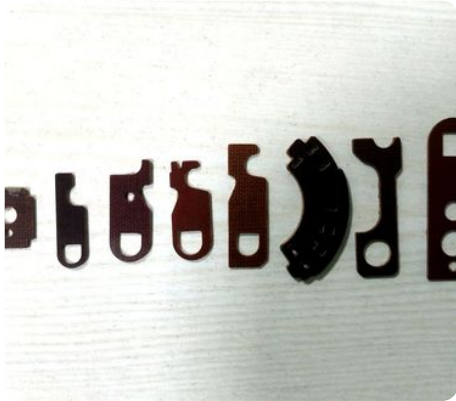
SPRING (SPLIT) WASHERS: STANDARD SIZES, DIN 127 B

Size	Bore d1	OD d2 max	Width b	Thickness s	Free height h
M3	3.1–3.4	6.2	1.3 ± 0.1	0.8 ± 0.1	1.6–1.9
M4	4.1–4.4	7.6	1.5 ± 0.1	0.9 ± 0.1	1.8–2.1
M5	5.1–5.4	9.2	1.8 ± 0.1	1.2 ± 0.1	2.4–2.8
M6	6.1–6.5	11.8	2.5 ± 0.15	1.6 ± 0.1	3.2–3.8
M8	8.1–8.5	14.8	3.0 ± 0.15	2.0 ± 0.1	4.0–4.7
M10	10.2–10.7	18.1	3.5 ± 0.2	2.2 ± 0.15	4.4–5.2
M12	12.2–12.7	21.1	4.0 ± 0.2	2.5 ± 0.15	5.0–5.9

Other sizes and special sections are made to drawing. Flat, wave, cap-spring and split washers all come from one tool room, one inspection routine and one plating line, so a whole washer set can go through one PPAP route.

Wave and cap-spring ranges are from designs in production. Spring-washer dimensions follow DIN 127 B (mm); IS 3063 equivalents on request.

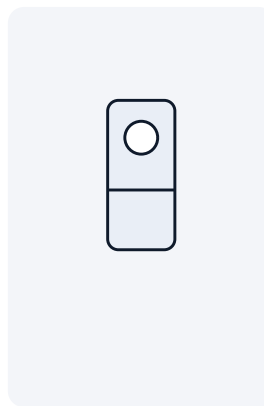
Insulation parts, terminals & gaskets



Insulating washers & tabs

Shouldered and plain insulating washers and tabs, punched from glass epoxy, bakelite and fabric bakelite. Used in horns, relays and switches.

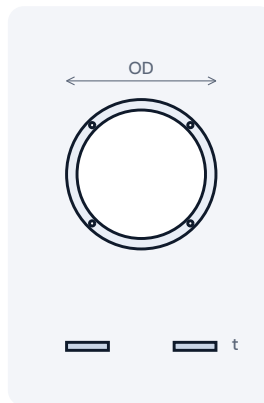
OD Ø3.5–14 · ID Ø2.1–5.8 · t 0.8–2.5 mm · 45+ designs



Terminals & contacts

Brass and phosphor-bronze terminals, tinned terminals, terminal rivets and spring contacts. Tin or nickel plating available.

Size Ø4.3–26 · t 0.15–1.0 mm · 20 designs



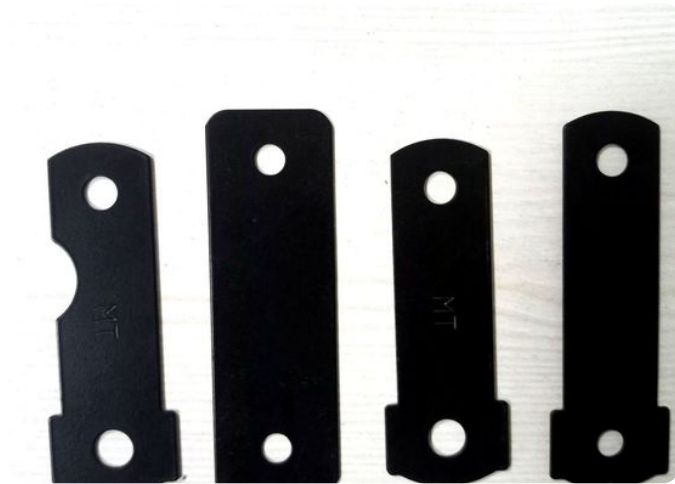
Gaskets

Ring gaskets and paper washers punched from leatheroid and gasket paper, with bolt holes to drawing.

OD Ø66–92 · ID Ø57–83 · t 0.25–0.4 mm · 7 designs

Non-metallic parts are punched on the same presses with dedicated tools. Material certificates are supplied with each lot.

Brackets, covers & pressings



Mounting brackets, covers, cases, carriers, retainers, stoppers, counterweights, clips and circlips, made on progressive, compound and stage tools. Parts are deburred, plated or powder coated as required.

Part type	Typical material	Thickness, mm	Tooling
Mounting brackets & plates	CRCA, spring steel	0.8–3.15	Progressive / stage
Covers, cases & caps	CRCA, SS	0.5–1.2	Draw + trim
Clips, retainers & circlips	Spring steel, SS	0.3–1.0	Progressive, hardened
Counterweights & stoppers	CRCA	1.2–3.0	Compound
Steel strips, equalisers & stays	CRCA	0.8–2.0	Blank + form

TOOLING TYPES WE BUILD AND RUN

Progressive tools

Multi-station strip tools for high volumes. Examples: push nuts, washers, terminals.

Compound tools

Blank and pierce in one stroke, for flat parts that must be concentric.

Stage tools

Separate blank, form and pierce steps, for brackets and low-volume parts.

Thickness ranges are from current production. Tools are designed and maintained in our in-house tool room.

Materials, finishes & how to enquire

MATERIALS WE PROCESS

Material	Thickness, mm	Typical parts
CRCA (cold-rolled steel)	0.25–3.15	Flat washers, brackets, covers, plates
Spring steel (EN42J / C80 / S65C)	0.20–1.80	Wave, cap-spring, lock washers, push-on nuts
Stainless steel (SUS 301 / 304)	0.20–1.20	Push nuts, lock washers, cap springs
Brass (CuZn)	0.20–0.80	Terminals, washers
Phosphor bronze	0.15–1.00	Contacts, disc springs, terminals
Aluminium	0.70–0.90	Washers, spacers
Glass epoxy / bakelite / fabric bakelite	0.80–2.50	Insulating washers and tabs
Leatheroid, fibre and gasket paper	0.25–1.20	Gaskets, paper washers

SURFACE FINISHES

Finish	Where	Thickness
Zinc, trivalent yellow / iridescent	in-house	6–8 µm typ.
Zinc, trivalent black	in-house	6–8 µm typ.
Zinc, blue-white	in-house	6–8 µm typ.
Zinc, green (olive) passivate	on request	6–8 µm typ.
Zinc-nickel, black or silver	outsourced	to spec
Tin (bright / dull)	outsourced	to spec
Black powder coat	outsourced	50 µm min.

SEND AN ENQUIRY

Drawing + quantity = quote

- 1 Send the drawing (PDF, DWG or STEP), the annual quantity and the finish you need.
- 2 We reply with a feasibility check, tool cost and piece price.
- 3 Samples with inspection report, then PPAP and series supply.

sales@gkindustries.co.in · www.gkindustries.co.in

Plot No. O-1, FIT, Sector-57, Faridabad, Haryana 121004