



TECHNICAL BUYER'S GUIDE · PRATISHNA ENGINEERS

GARMENT & APPAREL COMPONENTS INJECTION MOULDING MACHINE GUIDE

A practical guide for garment trims and accessories manufacturers: components, materials, mould requirements, production planning, automation, quality, worked examples and what to send for a machine recommendation.

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WHO THIS GUIDE IS FOR

Owners, plant and production managers, process engineers and purchase teams making buttons, snaps, zipper parts, cord locks, hangers, lingerie hardware, tag pins and buckles.

HOW TO USE IT

Sections 01 to 04 define the part, material and mould. Section 05 plans output. Sections 06 to 09 cover automation, quality, examples and your enquiry. Clamp force and shot sizing are covered in our Machine Selection Guide.

NEED A RECOMMENDATION?

Send your drawing, material, part weight, cavities and output target to sales@pratishnaengineers.com. The checklist in Section 09 lists what to include.

SECTION 01 · OVERVIEW

GARMENT & APPAREL COMPONENTS & INJECTION MOULDING

Garment trims are small, cheap and made in enormous numbers, yet each one has to fasten, hold, survive washing and match the fabric.

WHERE INJECTION MOULDING FITS IN APPAREL

India's textile industry is valued at about USD 179 billion, with about USD 37 billion in exports, and textiles and apparel made up 8.63% of merchandise exports in 2024 to 25^[1]. Nearly every garment carries trims, and most are sold on hangers with tag pins.

Not every trim is injection moulded. Polyester resin buttons are cast and machined and urea buttons are compression moulded. Moulded-tooth zipper chain is POM injected directly onto the tape on dedicated chain machines^[2], and many sliders are die-cast zinc. So first confirm which process the part really uses.

MAIN COMPONENT CATEGORIES

BUTTONS ABS, nylon, acrylic and POM buttons	SNAPS Plastic press studs, caps and sockets	ZIPPER PARTS Sliders, pullers, moulded tooth chain	CORD HARDWARE Toggles, cord stoppers, cord ends
HANGERS Garment and retail display hangers	LINGERIE HARDWARE Rings, sliders, hooks, clips	SHIRT TRIMS Collar stays, collar bones, shirt supports	TAGS & BUCKLES Tag pins, seals, belt buckles, adjusters

WHY INJECTION MOULDING SUITS THESE PARTS

- Tiny parts made in 16 to 64 cavities per shot.
- Snap and spring features formed in one piece, in colour.
- Parts that survive laundering without corroding.

TYPICAL MANUFACTURING CHALLENGES

- Cavity-to-cavity consistency of fits and forces.
- Flow marks on translucent and nude tones.
- Nylon moisture and repeated washing^[7].

WHERE MOULDING SITS IN THE PRODUCT CHAIN

COMPOUND POM, PA, PP, ABS	COLOUR masterbatch to card	INJECTION MOULDING trims, hangers	FINISHING plating, painting, laser	ASSEMBLY springs, snaps	TESTING pull, wash, colour	SUPPLY to garment makers
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TRIMS BY GARMENT TYPE

SHIRTS & TROUSERS Buttons, collar stays, shirt supports, tag pins.	OUTERWEAR & SPORTSWEAR Zipper parts, cord locks, snaps, buckles.	LINGERIE & INNERWEAR Rings, sliders, hooks and clips.	KIDSWEAR Snaps and buttons; toggle limits under EN 14682 ^[4] .
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KEY REQUIREMENTS FOR GARMENT TRIMS

HOLDING FORCE Snap fasteners are rated on the force to disengage them ^[3] .	WASH AND WEAR Trims go through repeated laundering and ironing.	COLOUR MATCH Parts must match the fabric standard across lots.
CHILD SAFETY Toggles on children's clothing are restricted by EN 14682 ^[4] .	SKIN CONTACT Lingerie hardware sits on skin; check brand requirements.	COST PER PIECE Trims sell by the thousand, so cavities and cycle decide margin.

SECTION 02 · COMPONENTS

MAJOR GARMENT & APPAREL COMPONENTS

The garment trims and accessories covered by this guide, their materials and what each asks of the moulding process.

COMPONENT	APPLICATION	MATERIAL(S)	INJECTION MOULDING CONSIDERATIONS
Plastic button	Shirts, trousers, outerwear, kidswear	ABS, nylon (PA6, PA66), PMMA, POM	Only thermoplastic button families are moulded. Very high cavitation; buttonhole cores and shank details drive the tool. Colour matching to the fabric standard is the recurring issue. ABS suits electroplating.
Snap fastener, press stud	Shirts, baby clothing, outerwear	POM, PA6, PA66	Engagement force is the sold specification and moves with small shrinkage changes, so cavity consistency decides the batch. Small shot, very high cavitation. Metal studs are stamped.
Zipper slider, puller, moulded tooth chain	Jackets, sportswear, bags	POM (teeth), PA66, ABS, PC	Tooth chain is moulded onto tape on dedicated machines ^[2] . Plastic sliders for corrosion-free, light zips; pullers often moulded even when the slider is metal.
Toggle, cord stopper, cord end	Hoods, waists, outerwear hems	POM, PA6, ABS, TPE	Spring cord lock is body plus plunger plus steel spring: two tools and assembly. Cord retention after repeated use. Two-shot TPE grip; UV-stabilised grades outdoors.
Garment hanger	Retail display and shipping	PP copolymer, HIPS, ABS, recycled PP	Long thin flow across the shoulder; fill, not clamp, is the limit. Short shot at the shoulder tip. Sag under load is creep. Hook moulded or steel insert.
Bra and lingerie hardware (rings, sliders, hooks, clips)	Straps and closures	POM, PA6, PA66	Small precision parts on skin with a fatigue duty; a slider that creeps loses adjustment. Nylon moulded dry, designed on conditioned data. Translucent and nude tones show flow marks.
Collar stay, collar bone, shirt packaging support	Shirts and shirt packing	PP, PS, PA6	Very simple, very high volume; cycle and cavities are the business case. Stays must stay flat after laundering. Shirt supports and clips use PP living hinges ^[6] .
Tag pin, seal, label fastener	Retail tagging	PP, PA6, PE	Moulded as continuous clips of pins on a runner bar; the runner is part of the product and must suit the tagging gun. Break-off force at the pin root. Extremely high cavitation.
Belt buckle, adjuster, strap hardware	Belts, straps, activewear	POM, PA6, PA66, ABS	Fashion finish: plated or painted versions need plating grade and a polished tool. Prong root radius and wall decide fatigue life. Metal buckles are die-cast or stamped.

Polyester resin and urea buttons, metal press studs, die-cast sliders and metal buckles use other processes and are outside this guide. Zipper parts also appear in the Luggage & Bags guide.

WHAT THE BUYER ACTUALLY SPECIFIES

TRIM	SOLD SPECIFICATION	MOULDING VARIABLE BEHIND IT
Snap fastener	Engagement and unsnapping force ^[3]	Interference, shrinkage, cavity balance
Cord lock	Cord retention after use	Bore and plunger size, spring fit
Hanger	No sag under a loaded garment	Material creep, section, recycled content
Tag pin	Break-off force at the pin root	Root geometry and fill
Buckle	Webbing pull and cycle life	Prong root radius, voids

SECTION 03 · MATERIALS

MATERIALS USED FOR GARMENT & APPAREL COMPONENTS

Functional trims lean on POM and nylon; cosmetic trims on ABS, PC and acrylic; hangers, stays and tag pins on polyolefins and styrenics.

MATERIAL	TYPICAL COMPONENTS	RELEVANT PROPERTIES	PROCESSING CONSIDERATIONS	LIMITATIONS TO CHECK
POM	Snaps, zipper teeth, cord locks, lingerie hardware, buckles, buttons	Stiff, low friction, springy; used for zipper teeth ^{[2][9]} .	High shrinkage; keep apart from PVC in the barrel.	Sink on thick sections; limited paint adhesion.
PA6, PA66	Snaps, lingerie hardware, buckles, cord locks, tag pins, collar stays	Strong and tough when conditioned.	Dry before moulding ^[8] .	Moisture changes size and stiffness ^[7] .
ABS	Buttons, pullers, buckles, cord locks, hangers	Good surface; plating grades.	Needs drying.	Chemical and UV resistance.
PC	Zipper sliders and pullers	Tough, clear or coloured.	Must be dried; high melt temperature.	Stress cracking with some chemicals.
PMMA (acrylic)	Buttons	Clarity and gloss.	Dry; shows flow and gate marks.	Brittle under impact.
PP, PP copolymer	Hangers, collar stays, shirt supports, tag pins	Tough, light, forms living hinges ^[6] .	High shrinkage; long flow in hangers.	Creep and sag under a hanging load.
Recycled PP	Hangers	Lower cost, recycled content.	Shifts the process window; qualify each blend.	Lot-to-lot colour and flow.
HIPS, PS	Hangers, collar stays	Rigid, glossy, low cost.	Easy flow; low shrinkage.	Brittle; limited load.
PE	Tag pins and seals	Flexible and tough.	High shrinkage.	Low stiffness.
TPE	Soft grips on cord locks	Soft touch.	Bond to the rigid body must be checked.	Flash; compression set.

General material behaviour only. Confirm grade data with the material supplier.

MATCHING THE MATERIAL TO THE JOB

DUTY	EXAMPLES	MATERIALS IN THIS GUIDE
Repeated snap or spring action	Snaps, cord locks, buckles, zipper teeth	POM, PA6, PA66
Show surface or plating	Buttons, pullers, fashion buckles	ABS, PC, PMMA
Hanging load, long flow	Hangers	PP copolymer, recycled PP, HIPS, ABS
Cheap, flexible, disposable	Tag pins, seals, shirt supports	PP, PE, PS, PA6

NYLON: WASHED, NOT DRY

Lingerie hardware, snaps and tag pins in nylon are moulded dry but used wet and washed. Moisture pickup shifts dimensions^[7], so gauge and test them conditioned.

POM and PVC must never share a barrel or regrind stream. Trim plants that also run soft PVC for other products should keep them on separate machines or purge very thoroughly between them.

MATERIAL SELECTION QUESTIONS

- ☐ How many open and close cycles?
- ☐ Washed, ironed or dry-cleaned?
- ☐ Moulded-in colour, plated or painted?
- ☐ Is the garment for children?

SECTION 04 · DESIGN & MOULD

COMPONENT DESIGN & MOULD REQUIREMENTS

Trim moulds are small but crowded: many cavities, fine cores and spring features that must come out identical in every cavity.

DESIGN FEATURES THAT AFFECT MOULDING

FEATURE	WHY IT MATTERS IN GARMENT TRIMS	MOULDING IMPLICATION
Snap interference	Engagement force of snaps and buckles.	Tight cavity-to-cavity dimensions; stable shrinkage.
Buttonholes and shanks	Sewing holes and shank loops on buttons.	Fine core pins; wear and breakage of cores.
Spring arms and prongs	Cord locks, buckles, lingerie sliders.	Root radius and wall set fatigue life; gate away from roots.
Long thin sections	Hanger shoulders and hooks.	Fill limited by flow length; gate position and speed.
Living hinges	Shirt supports and clips.	Gate so melt crosses the hinge; flex after ejection ^[6] .
Runner as product	Tag pin clips on a runner bar.	Runner geometry and ejection designed for the tagging gun.
Show surfaces	Buttons, pullers, plated buckles.	High polish, gate on non-visible edge, no flow marks.
Moulding onto tape	Zipper tooth chain.	Specialised chain moulds and machines ^[2] .

MOULD CONSIDERATIONS

ITEM	TRIM POINTS	ITEM	TRIM POINTS
Cavity layout	Buttons, snaps, pins: 16 to 64. Hangers: 2 to 8.	Cooling	Thin parts cycle fast; thick buckle roots set the time ^[1] .
Runner	Hot runner for high-cavity POM; cold runner often simpler for small tools.	Surface	Polish for plating; textures for matt buttons.
Balance	Equal filling keeps snap forces equal.	Inserts	Logo and size inserts on one base.
Venting	Fine vents; POM needs good venting against deposits.	Maintenance	Core pins and vents cleaned on a schedule.

SECONDARY OPERATIONS THAT SHAPE THE MOULD

OPERATION	TYPICAL PARTS	WHAT IT ASKS OF THE MOULDED PART
Electroplating, painting	Buttons, pullers, buckles	Plating grade, clean polished surface, no sink.
Spring assembly	Cord locks	Body and plunger bores held to size.
Hinge flexing, clip forming	Shirt supports, tag pin clips	Parts presented so they can be flexed or cut to format.

PLANNING A TRIM RANGE

SHARED BASES Button, snap and buckle sizes change inserts, not whole tools.	MATCHED PAIRS Snap studs and sockets from matched tools and lots.	COLOUR FAMILIES Keep tools running one colour family at a time.	BRAND MARKS Logo inserts or laser marking instead of new tools.
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SECTION 05 · PRODUCTION PLANNING

PRODUCTION CAPACITY & CYCLE-TIME PLANNING

Trims are counted in millions per month. Output comes from cavities and cycle, and colour changes eat into both.

OUTPUT

Parts/hour = Cavities × 3600 ÷ Cycle time (s)

Effective/hour = Parts/hour × Utilisation

Day = Effective/hour × Hours run

Utilisation covers colour changes, start-up, maintenance and rejects.

EXAMPLE 1 · 32-CAVITY POM SNAP PART

$32 \times 3600 \div 12 \text{ s} = 9,600 \text{ /h}$

$\times 0.85 \text{ utilisation} = 8,160 \text{ /h}$

$\times 22 \text{ h} = 179,520 \text{ /day}$

$\times 26 \text{ days} = 4,667,520 \text{ /month}$

EXAMPLE 2 · 4-CAVITY PP HANGER

$4 \times 3600 \div 20 \text{ s} = 720 \text{ /h}$

$\times 0.85 = 612 \text{ /h} \cdot \times 22 \text{ h} = 13,464 \text{ /day}$

$\times 26 \text{ days} = 350,064 \text{ /month}$

Working backwards: for 500,000 hangers a month in 572 running hours you need 874 per hour. Cavities = $874 \times 20 \div (3600 \times 0.85) \approx 5.7$, so a 6-cavity mould or a second machine.

Illustrative example. Cycle times of 12 s and 20 s, 85% utilisation, 22 h per day and 26 days per month are assumptions. Actual requirements depend on the component, material, mould and production conditions.

WHAT SETS THE CYCLE TIME

PHASE	TRIM INFLUENCE
Injection & hold	Short on small trims; long flow on hangers.
Cooling	Usually the largest share; rises roughly with wall thickness squared ^[11] .
Ejection	Fine cores and many cavities must eject cleanly.
Runner handling	Sprue pickers and clip-format runners.

BALANCING CAVITIES, CLAMP FORCE AND OUTPUT

PP HANGER MOULD	PROJECTED AREA	CALCULATED FORCE	RATED AT 85%	SHOT	EFFECTIVE OUTPUT
2 cavities	130 cm ²	52 t	62 t	68 g	306 /h
4 cavities	256 cm ²	103 t	121 t	132 g	612 /h
8 cavities	504 cm ²	203 t	239 t	258 g	1,224 /h

Illustrative example. Force = projected area × clamp factor K × safety factor S. PP, PE and PS are commonly given 2 to 3 US tons per square inch^[10], about 0.28 to 0.42 t/cm²; K = 0.35 t/cm² and S = 1.15 assumed. Also assumed: 60 cm² and 30 g per hanger, runner area 10 / 16 / 24 cm² and weight 8 / 12 / 18 g, 20 s cycle, 85% utilisation. On hangers, filling the long shoulder often limits cavities before clamp force does.

PLANNING TOTAL MACHINE HOURS

Machine hours = Σ (monthly volume per item and colour ÷ effective output)

Add the hours for every size and colour, then divide by the running hours per machine (572 in these examples).

PLAN BY TRIM GROUP

TINY PRECISION TRIMS

Snap, buttons, lingerie parts. Output grows with cavities if balance holds.

LONG PARTS

Hangers. Output grows with cavities only while the shoulder still fills.

ASSEMBLED TRIMS

Cord locks, buckles with springs. Output follows the assembly rate.

MACHINE UTILISATION AND PLANNED DOWNTIME

COLOUR CHANGES

Trims follow fabric seasons; sequence light to dark.

SEASON PEAKS

Build stock of core sizes and colours before peaks.

DRYING

Nylon and ABS dryers sized for the busiest mix.

TOOL CARE

Clean vents and core pins before they stop the tool.

SECTION 06 · AUTOMATION

AUTOMATION & PRODUCTION EFFICIENCY

In trim plants the labour is not in the moulding but in separating, counting, assembling and checking colour.

Automation	Where it adds value in garment trims	When it usually makes sense
Sprue picker	Removes runners from button, snap and buckle moulds.	Multi-cavity cold-runner tools.
Separators and conveyors	Separate small trims from runners.	High cavity counts and fast cycles.
Counting and packing	Counts trims into packs by size and colour.	Trims sold by the thousand or gross.
Spring and part assembly	Assembles cord lock body, plunger and spring.	Cord locks at volume.
Two-shot moulding	Adds a TPE grip to cord locks and pullers.	Soft-touch designs at volume.
Hanger stacking	Removes and stacks hangers from the mould.	Multi-cavity hanger tools.
Vision inspection	Checks short shots, flash and colour.	Cosmetic trims and high cavity counts.
Central drying and loading	Dries nylon, ABS and PC; conveys to presses.	Several machines on hygroscopic grades.

Most trim moulds run many sizes and colours of the same design. Automation that works across them, such as separators, counters and vision, usually pays back before automation built for one mould.

AUTOMATION BY PRODUCT GROUP

Product Group	Main Automation	Why
Buttons, snaps, pins	Separator, counting, vision	Millions of small parts by count
Cord locks, buckles	Assembly, two-shot	Several parts or materials per trim
Hangers	Take-out and stacking	Long parts, retail packing

DECIDING ON AUTOMATION

PARTS PER HOUR Thousands of trims an hour cannot be sorted and counted by hand.	COLOUR RISK Vision catches colour drift before a whole lot is packed.	ASSEMBLY Spring and snap assembly is repetitive and suits automation.
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INTERFACES TO SPECIFY ON THE MACHINE

ROBOT Signal interface and safety interlocks.	HOT RUNNER Zone control for multi-cavity POM tools.	CORE PULLS Circuits for side actions on buckles.	AUXILIARIES Dryer, loader, separator and counter.
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WHERE THE COST OF A MOULDED PART COMES FROM

MATERIAL POM, PA, PP	MACHINE per machine hour	LABOUR sorting, packing	POWER kWh per part	MOULD cavities, inserts	REJECTION colour, short shots	PACKING by count
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On tiny trims, material cost per part is low and machine hours per thousand parts dominate, so cavity count and cycle decide cost. On hangers, material weight matters more. Use your own rates to compare options, and count the labour for sorting and colour checks in each case.

SECTION 07 · QUALITY

QUALITY, TESTING & COMMON DEFECTS

A trim is judged when the garment is worn and washed: it must hold, work every time and still match the fabric.

TESTS AND CHECKS

CHECK	WHAT IT INVOLVES	LINK TO MOULDING
Unsnapping force	ASTM D4846 measures the force to disengage snap fasteners, pulled perpendicular and parallel to the snap plane ^[3] .	Snap interference, cavity balance, shrinkage
Children's cords and toggles	EN 14682 covers cords and drawstrings on clothing for children up to 14 ^[5] ; toggles only on drawstrings with no free ends or decorative cords ^[4] .	Toggle design and attachment
Cord retention	Cord lock grip after repeated use.	Plunger and bore dimensions, spring fit
Buckle strength	Webbing pull test plus cycle test.	Prong root radius, voids, weld lines
Hanger load	Sag and hook strength under a loaded garment.	Creep, wall section, recycled content
Tag pin break-off	Force to break the pin from its clip.	Pin root geometry, fill
Wash and colour	Laundrying and colour match to the fabric card.	Masterbatch, nylon conditioning ^[7]

Test limits usually come from the brand or buyer specification. Read the current edition of each standard before quoting a clause. Test nylon trims after conditioning and after the specified number of wash cycles, not straight off the machine.

IN-PROCESS CONTROLS

WEIGHT BY CAVITY Flags short shots and imbalance.	SNAP GAUGES Engagement feel or force on samples.	COLOUR Against the card under set lighting.	VISUAL Flash on buttonholes, flow marks on show faces.
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TROUBLESHOOTING COMMON DEFECTS

DEFECT	POSSIBLE CAUSES	EFFECT ON THE PART	AREAS TO INVESTIGATE
Snap force varies	Cavity imbalance, shrinkage drift	Snaps too tight or open by themselves	Runner balance, mould temperature, hold
Short shot at hanger shoulder	Long flow, cold melt, slow fill	Weak or incomplete hangers	Gate position, speed, melt temperature
Flash in buttonholes	Worn core pins and shut-offs	Holes that cut thread	Core pin fit, clamp, pressure
Flow marks on translucent tones	Gate position, jetting, speed	Visible marks on lingerie parts	Gate design, injection profile
Brittle nylon parts	Wet or over-dried material, regrind	Cracked sliders and pins	Drying ^[8] , regrind ratio
Colour variation	Dosing, resin lot, recycled content	Mismatch with fabric	Dosing, lot control
Buckle prong cracks	Weld line or sharp root, voids	Buckle fails in use	Gate position, root radius, hold
Mould deposits	Poor venting on POM	Burns, dull surfaces	Venting, melt temperature

SECTION 08 · WORKED EXAMPLES

PRACTICAL MACHINE-SELECTION EXAMPLES

Three typical garment trims show how the selection logic changes with the component. These are engineering illustrations with assumed inputs, not customer case studies.

A · POM SNAP FASTENER PART		PRECISION
APPLICATION · MATERIAL	Press stud socket · POM	
CHARACTERISTICS	Small part, snap interference sets engagement force	
CAVITIES · OUTPUT	32 · about 8,160 per hour at 12 s (Section 05)	
MOULD CONSIDERATIONS	Balanced hot or cold runner, fine venting	
SECONDARY	Counting, packing, unsnapping tests ^[3]	
EVALUATE Clamp force is small; shot repeatability and equal filling across cavities decide the choice. STILL NEEDED CAD, target snap force, sizes, colours, volume.		

B · PP GARMENT HANGER		LONG FLOW
APPLICATION · MATERIAL	Retail hanger · PP copolymer or recycled PP	
CHARACTERISTICS	Long thin shoulder, hook, load under a garment	
CAVITIES · OUTPUT	4 · about 612 per hour at 20 s (Section 05)	
MOULD CONSIDERATIONS	Gate position for shoulder fill, hook insert or moulded hook	
SECONDARY	Stacking and packing	
EVALUATE The Section 05 table gives about 103 t calculated and a 132 g shot, so a clamp rated around 121 t or more. Injection speed for long flow matters as much as tonnage. STILL NEEDED CAD, recycled content, volume, load requirement.		

C · SPRING CORD LOCK		MULTI-PART
APPLICATION · MATERIAL	Cord stopper · POM body and plunger, optional TPE grip	
CHARACTERISTICS	Two moulded parts plus a steel spring	
CAVITIES · OUTPUT	Two tools · set by assembly rate	
MOULD CONSIDERATIONS	Bore and plunger fit; two-shot tool if TPE grip	
SECONDARY	Spring assembly; cord retention test	
EVALUATE Plan two small presses or one two-shot machine; the assembly method decides more than tonnage. STILL NEEDED drawings of both parts, grip option, cord size, volume.		

WHAT DECIDED THE MACHINE IN EACH EXAMPLE

SELECTION FACTOR	A · SNAP PART	B · HANGER	C · CORD LOCK
Main limit	Cavity consistency	Flow length, cavities	Two parts plus assembly
Clamp force	Small	About 121 t rated	Small
Auxiliaries	Separator, counter	Stacker	Assembly, two-shot unit

Illustrative example. Actual requirements depend on the component, material, mould and production conditions.

SECTION 09 · BUYER CHECKLIST

MACHINE BUYER'S CHECKLIST

What to prepare before asking an injection moulding machine manufacturer for a recommendation on garment trims and accessories.

COMPONENT

☐ 2D drawing and 3D CAD model
 ☐ Part and runner weight, wall thickness
 ☐ Material and grade data
 ☐ Show faces, plating, textures
 ☐ Snap, spring or hinge features

PRODUCTION

☐ Monthly volume per size and colour
 ☐ Cavity count and target cycle time
 ☐ Operating hours and shifts
 ☐ Counting and packing format
 ☐ Season peaks

MOULD

☐ New or existing mould; size and weight
 ☐ Hot or cold runner
 ☐ Core pins, side actions
 ☐ Runner format (tag pin clips)
 ☐ Previous machine specification, if any

GARMENT APPLICATION

☐ Adult or children's clothing
 ☐ Washing, ironing and dry cleaning
 ☐ Brand test specification
 ☐ Colour card and tolerance
 ☐ Assembly: springs, second shot

DOCUMENTS TO REQUEST FROM THE MACHINE SUPPLIER

PLATEN DRAWING

Tie-bar spacing, mounting holes, ejector pattern, nozzle details.

LAYOUT

Footprint, robot and conveyor space, access.

UTILITIES

Connected load, cooling water, air and oil needs.

TRIAL REPORT

Trial or acceptance data at your settings.

QUESTIONS TO ASK BEFORE YOU BUY A MACHINE

#	QUESTION	WHY IT MATTERS FOR GARMENT TRIMS
1	What shot repeatability does the machine hold at my small shot size?	Snap force and fit across cavities.
2	How precise is injection speed and pressure control at low volumes?	Tiny shots on buttons and snaps.
3	How many hot runner zones can be controlled?	Multi-cavity POM and nylon tools.
4	What injection speed is available for long thin flow?	Hanger shoulders.
5	Can the control store settings for each size and colour?	Frequent colour changes.
6	Is a second injection unit available?	TPE grips on cord locks and pullers.
7	What robot, separator and counter interfaces are supported?	Millions of parts sold by count.
8	What is the energy use per thousand parts?	Low price per trim.
9	Can the machine log shot data for traceability?	Brand audits and batch records.
10	What installation, training and spare-parts support is included?	Uptime through season peaks.

SECTION 10 · TECHNICAL CONSULTATION

PRATISHNA ENGINEERS & TECHNICAL CONSULTATION

Pratishna Engineers Ltd. is a Mumbai-based injection moulding machine manufacturer with in-house design, manufacturing, assembly, testing and service, supplying plastic component manufacturers in India and international markets.

35+

YEARS OF EXPERIENCE

9,000+

MACHINES SUPPLIED

1,000+

CUSTOMERS

In-house

DESIGN TO SERVICE

Machines are used for automotive, packaging, electrical and electronics, medical, consumer, agriculture and industrial applications.

OUR TECHNICAL APPROACH

COMPONENT	MATERIAL	MOULD	PRODUCTION REQUIREMENT	MACHINE CONFIGURATION
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SEND YOUR COMPONENT & PRODUCTION REQUIREMENTS

Component drawing · material · part weight · mould details · cavity count · production requirement · other requirements such as colour cards, plating or brand test specifications.

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