ResiCheck machine suitability report

Technical preselection of injection molding machines

Project: Housing cover example · Date: 2026-11-29

Recommended machine

SGM 04 · Hydraulic 2500 kN

Check

Technically possible, but individual points should be checked before production approval.

Input data

Process **Single-component injection**	Material **ABS ·**	Part weight **42 g**	Cavities **2**
Sprue weight **8 g**	Projected area **18500 mm²**	Wall thickness **2 mm**	Mean cavity pressure **525 bar spez**
Required clamping force **2234 kN**	Required PS shot weight **96.9 g**	Plasticizing demand, estimate **47.5 kg/h**	Injection pressure, estimate **788 bar spez**
Required shot volume **95.8 cm³**	Cooling time **9.6 s**		

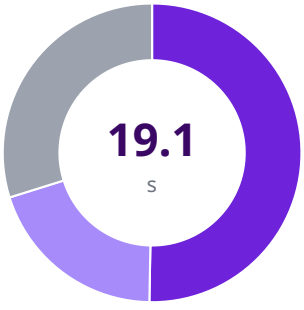
Assumptions: Clamp force safety margin 15 % · Dosing reserve 10 % · Injection pressure loss factor 1.5 · Source of handling time, cycle time: Default handling time, no dry cycle time stored

Top 5 machines

Rank	Machine	Clamping force	Shot weight	Status
1	**SGM 04** Hydraulic 2500 kN	**Suitable** Utilization 89 %	**Suitable** Utilization 14 %	**Check** Match 79 %
2	**SGM 06** Two-platen 4000 kN	**Suitable** Utilization 56 %	**Check** Utilization 8 %	**Check** Match 79 %
3	**SGM 01** Hydraulic 500 kN	**Unsuitable** Utilization 447 %	**Unsuitable** Utilization 90 %	**Unsuitable** Match 29 %
4	**SGM 05** Electric 800 kN	**Unsuitable** Utilization 279 %	**Suitable** Utilization 62 %	**Unsuitable** Match 29 %
5	**SGM 02** Electric 1100 kN	**Unsuitable** Utilization 203 %	**Suitable** Utilization 45 %	**Unsuitable** Match 29 %

Shot weight traffic light, utilization (shot without dosing reserve): green 10–90%, yellow 5–10% and 90–95%, otherwise red. Too small if the shot with 10% dosing reserve exceeds the maximum.

Match: 100% = perfect fit. Utilization = demand / machine capacity, not a rating.



Estimated cycle time – recommended machine

SGM 04 · Hydraulic 2500 kN

Cooling	**9.6 s · 50 %**
Injection + holding	**3.8 s · 20 %**
Dry cycle + handling	**5.7 s · 30 %**

Estimate, not a measured value: cooling time from the calculation; dry cycle from the machine data, if missing, 60% of the remainder; injection + holding is the rest.

This report was created with Resinovo from user inputs, typical material guide values and simplified assumptions. It is a technical preselection and estimate, not a verified or certified calculation. Assessments such as “suitable” or “recommended” refer only to the characteristic values shown; the report does not replace sampling, a mould filling study, process validation or a technical review in the individual case.