Flowservice srl
Via XI Febbraio 53/A - 25067 Lumezzane S.A. (BS) - Italy
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www.flowservicesrl.com - simulazione@flowservicesrl.com

ProCAST Check List

Questionnaire for the simulation of the high pressure die casting process - Aluminium

Please fill in as many of the following fields as possible.

A correct and complete form will ensure a better result of the study, both in terms of simulation accuracy and in the subsequent explanation of any problems.

Please send the completed form by e-mail to simulazione@flowservicesrl.com. Large files (geometries, technical documentation) can be sent via WeTransfer or through the shared area we will indicate.

IMPORTANT: Please attach the technical data sheet of the die casting machine and its PQ² diagram (nomogram).

Please also attach any drawings and/or documentation identifying critical areas of the part.

For any clarification, please do not hesitate to contact us.

1. Identification

Company

Contact person: Name | Phone | E-Mail

Part name | Number of parts planned/produced

Weight or volume (please state the unit):

Complete casting | Part only | Part + overflows

2. Process parameters

Material: Grade | Alloy temperature in the holding furnace [°C]

Φ Plunger [mm] | MAX stroke (A) [mm] | MAX plunger protrusion (B) [mm]

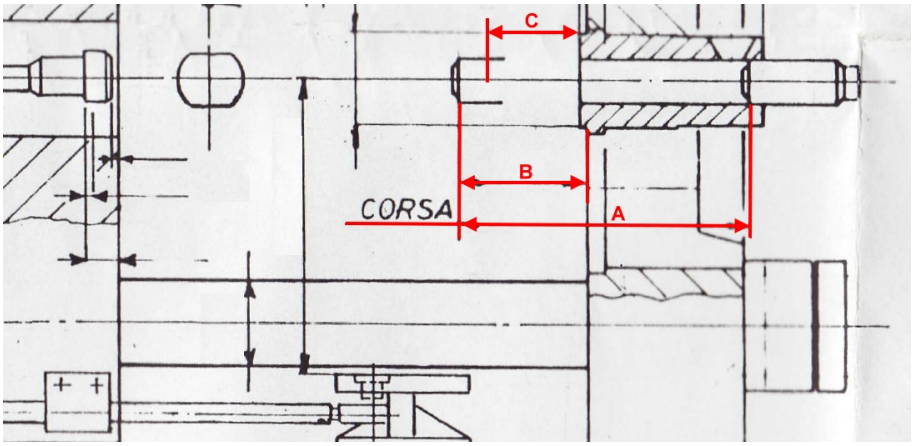
Clamp force | Distance pour hole - fixed platen (C) [mm] | Pouring time [sec]

Number of cavities

Vacuum:

☐ Used ☐ Not used ☐ Prepared

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Reference for dimensions A (max stroke), B (max plunger protrusion) and C (distance pour hole - fixed platen).

3. Additional information

Project status:

☐ a similar mold already exists ☐ new mold ☐ existing mold with problems ☐ other

Finished part characteristics:

☐ excellent aesthetic quality ☐ no porosity ☐ balance between porosity and aesthetics

Die temperature:

☐ Oil temperature control ☐ Water cooling ☐ Temperature not controlled

If possible, state the average die temperature [°C]

Metal feeding system:

☐ direct feeding (Striko) ☐ Cartesian ladle ☐ rotary ladle

Can the machine run a first phase with controlled velocity?

☐ Yes ☐ No

If yes, which velocity profile can be used (ramp, steps, etc.)?

Notes (use of the finished part; critical areas; machining after casting; etc.)

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4. Further details (optional)

Alloy: EN designation

Subsequent heat treatment:

☐ Yes ☐ No

Analyses required (multiple choices allowed):

☐ filling ☐ solidification ☐ porosity ☐ gates ☐ shot sleeve ☐ die thermal balance

Injection profile:

1st phase velocity [m/s]

2nd phase velocity [m/s]

Switch-over point [mm]

Intensification pressure [bar]

Die temperature control:

Number of circuits

Fluid temperature [°C]

Die release spray time [s]

Quality requirements (multiple choices allowed):

☐ pressure tightness ☐ X-ray inspection ☐ areas to be machined

Allowed porosity class

3D files available (multiple choices allowed):

☐ STEP ☐ Parasolid ☐ IGES ☐ other

Does the file include the feed system?

☐ Yes ☐ No

Does the file include the cooling circuits?

☐ Yes ☐ No

Other format (please specify)

Date by which results are needed