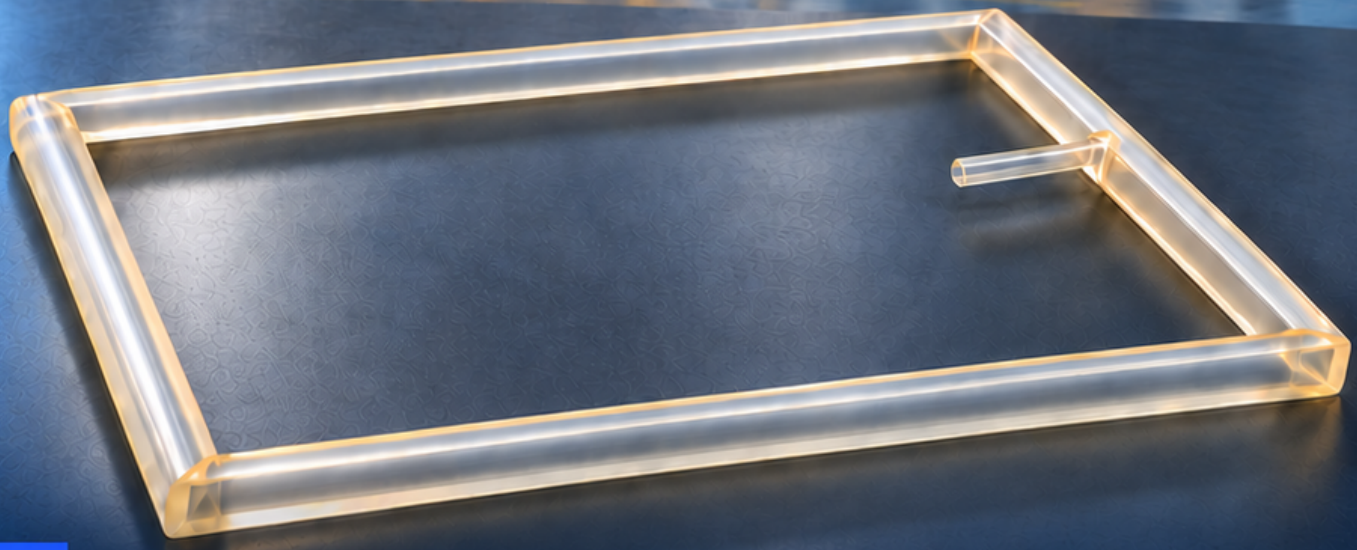
INFLATABLEGASKETS
INFLATABLE SEALING SOLUTIONS

INDUSTRY CATALOGUE / 2026

Polyurethane Inflatable Seals

For Foundry and Moulding Systems





FOUNDRY / MOULDING / INFLATABLE SEALS

inflatablegaskets.com

Controlled contact for large frames

Polyurethane inflatable seal solutions assessed for the geometry and operating conditions of foundry and moulding equipment.



Large-frame configurations beside a moulding line: illustrative product visualisation.

Activated by internal pressure

Air supplied through the inlet expands the hollow profile towards its intended contact surface. Sealing depends on the mounting geometry, working gap and controlled inflation pressure acting together.

Frames made for the application

Profile produced in continuous lengths is joined into a closed frame to suit the required width and length. Corners, air inlet position and seating surface are assessed against the equipment interface.

Inside this catalogue

Machine environments • Operating principle • Profile geometry • Polyurethane selection • Installation and care • Project information

Automatic green sand moulding

In repetitive production, the seal must be considered together with machine movement, mating surfaces and cycle conditions.



Blue vertical moulding machine: illustrative scene developed from a real machine reference.

Requirements around the line

Green sand moulding lines form and transfer sand moulds in successive cycles. Seal assessment considers sand and dust accumulation, surface cleanliness and repeated opening and closing movements.

The mounting location matters

The machine brand alone does not establish compatibility. Channel dimensions, mating-surface position, working clearance and the air connection are reviewed before selecting a profile and frame.

Application verification

The image illustrates an operating environment. Compatibility with a particular machine and the exact mounting location require technical review.

Different layouts, shared requirements

As the moulding cell changes, frame proportions, channel arrangement and access to the air connection also change.



Illustrative vertical moulding line with a different enclosure and mould-transfer arrangement.

Fit within the line layout

Service access, moving components and air-line routing should be assessed together. The seal must be positioned to avoid dragging during operation, while the inlet hose must remain clear of pinch points.

Access is as important as size

Large or elongated frames require attention to corner positions, even seating and maintenance access. The air inlet should be located where it can be reached and protected on the equipment.

A practical starting point

An existing seal sample, photographs of the mounting channel and a dimensioned drawing should be reviewed together.

Inflate, make contact, deflate

Controlled air pressure inside the hollow profile creates the sealing contact.

01 Position

Seat the seal in its channel and bring the mating surface into position.

02 Pressurise

Supply air to the hollow profile at a controlled pressure.

03 Maintain contact

The profile expands in the designed direction to contact the mating surface.

04 Release air

Exhaust the air and confirm that contact is released before movement.

Consider the complete system

The regulator, valve, exhaust path and any pressure monitoring are selected for the machine cycle. Adequate deflation should be confirmed before movement begins and addressed in the control sequence.

More pressure is not the answer

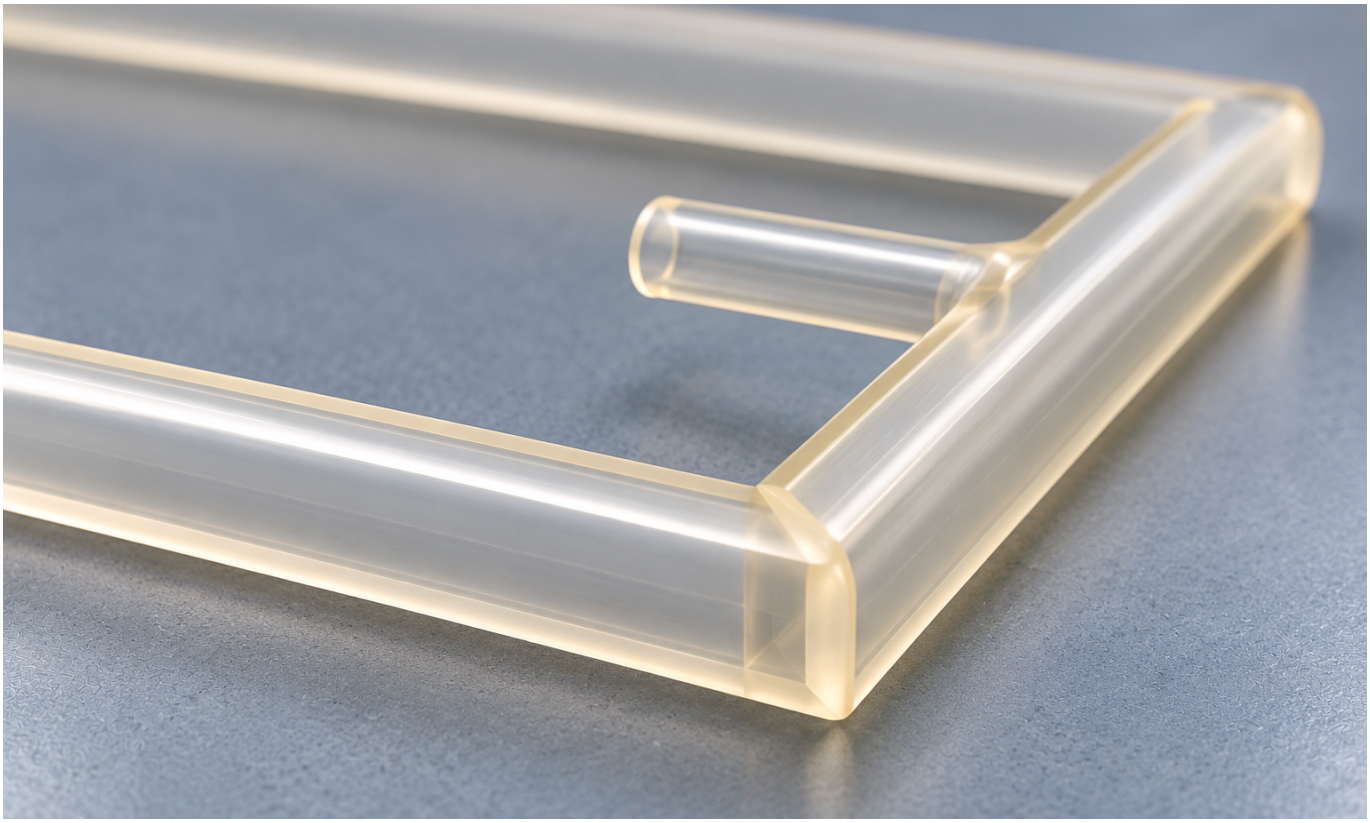
If contact is inadequate, first check clearance, channel geometry, mating surfaces and leakage. Increasing pressure without assessment can impose additional loads on the profile and corner joints.

General operating sequence

This sequence is not a machine control or installation drawing. Pressure, inflation time and exhaust time must be established for the application.

Flat inner face, gently curved exterior

The reference profile has defined inner edges, a shallow convex outer face and a straight air inlet pointing into the frame opening.



Illustrative close-up of the corner and air inlet, based on the product reference.

Closed-frame geometry

The flat inner face points towards the frame opening. A shallow crown forms the outer surface. The internal air passage carries pressure around the closed profile. Cross-section dimensions are confirmed by a technical drawing.

Joints and air inlet

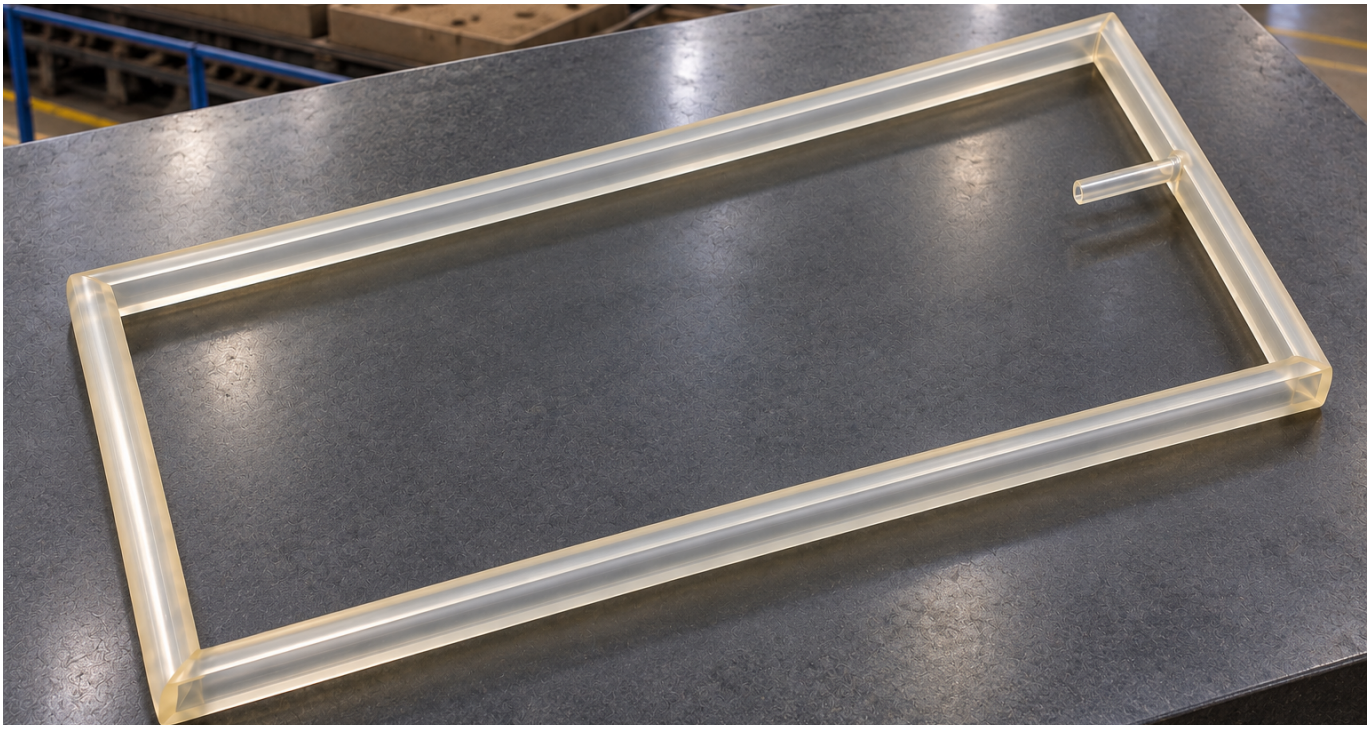
Corner joints maintain the continuity of the frame. The straight inlet hose extends from the inner face into the opening. Avoid tensile loads at its root, sharp bending and pinching against adjacent parts.

A sizing principle

Changing overall frame dimensions does not mean scaling the cross-section arbitrarily. Profile size, wall thickness and air inlet geometry are assessed separately.

Why polyurethane?

An elastomer family considered where flexibility and mechanical durability are required together.



Resistance to abrasion

Suitable polyurethane grades can offer high abrasion resistance. This is relevant when assessing applications exposed to rubbing or particles.

Flexibility and strength

Elastic behaviour and mechanical strength can be considered together. Hardness and formulation influence the way the profile deforms.

A range of material options

Polyurethane is not a single formulation. Chemistry and hardness options allow the material to be matched to the operating environment.

Selection for the environment

Oil, cleaning agents, moisture and temperature must be reviewed individually. A grade suited to one condition may not suit another.

General material information only. Actual performance depends on the selected raw material and product testing. [1]

Match the material to the conditions

Selection goes beyond the name “polyurethane”: environmental exposure and operating cycles must be assessed together.

ASSESSMENT	WHAT TO REVIEW
Abrasion and friction	Check surface condition, particle build-up and contact during movement.
Oil and chemicals	Provide fluid identity, concentration, temperature and duration of contact.
Moisture and water	Hydrolysis resistance depends on the polyurethane grade; hot, humid conditions need specific assessment.
Temperature	State continuous operating temperature and short-term peaks separately.
Pressure and clearance	Inflation pressure is established with the profile, channel and mating-surface gap.
Hardness and flexibility	Hardness alone is not a quality measure; it must suit the required deformation and contact.
Cycles and maintenance	Opening frequency, dwell time and cleaning method affect service-life assessment.

Why no universal numerical ratings?

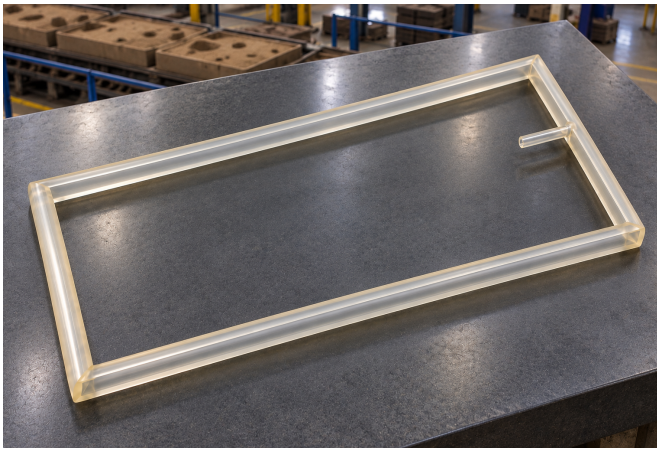
Operating pressure, temperature range, hardness and service life cannot be generalised without confirming the formulation, cross-section and test results.

General material assessment: [1]. This table is not a product test report or a performance guarantee.

Different proportions, one profile approach

Wide rectangular, elongated rectangular and near-square frames are assessed against the equipment interface.





Specify width and length

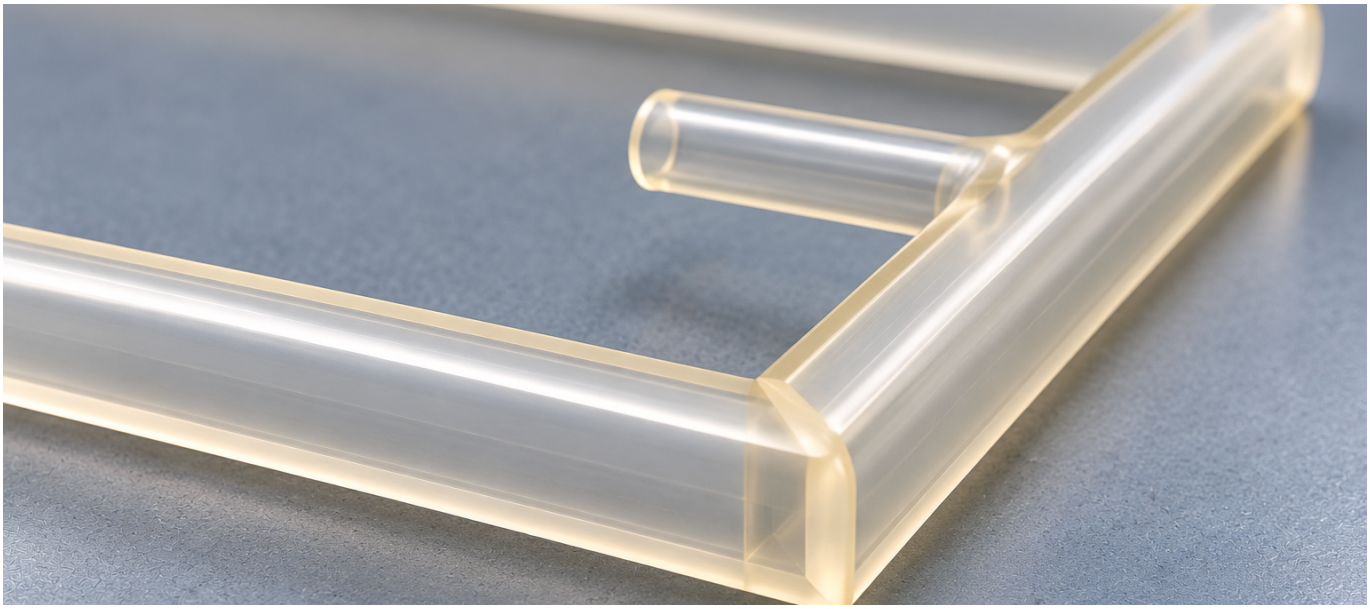
The inner opening, corner construction and inlet location matter as much as the outside dimensions. These images illustrate large industrial frame proportions; they are not scaled manufacturing drawings.

Custom-size assessment

Overall dimensions can change while retaining the profile cross-section. Suitability is verified against the channel, clearance, material and operating cycle.

Consistent contact starts with correct seating

Use these general checks alongside the machine manufacturer’s instructions and the application-specific installation information.



Before installation

Isolate the machine safely and release pressure. Remove sand, burrs and residues from the channel. Inspect sharp edges, surface damage and wear marks on the existing seal.

During positioning

Install without twisting or stretching the profile into place. Check corner seating. Do not pinch the hose or pull its root. Use the retention method specified for the approved application design.

At initial commissioning

Run a controlled trial with the approved pressure and cycle settings. Check even contact, corner joints and connection leakage. Verify adequate exhaust before movement.

During routine inspection

Look for cuts, cracks, permanent distortion and separated joints. Check the air line and exhaust function. Avoid unverified solvents and never intervene while the system is pressurised.

Inspection intervals depend on the environment, cycle count and observations in service.

The right solution starts with the right data

Providing the following information together helps us assess the application and prepare a quotation.

01

Geometry

Frame outside dimensions and clear opening; profile section; channel width, depth and corner shape.

02

Connection

Air inlet position and direction; hose dimensions; existing air supply and connection type.

03

Operating conditions

Inflation pressure, mating-surface gap, temperature, cycle frequency and dwell times.

04

Environment and sample

Oil, chemicals, moisture and sand exposure; existing seal sample, close-up photos and a dimensioned drawing.

Technical scope and references

Machine and product scenes are illustrative visualisations developed from reference images. They do not establish an exact mounting location or compatibility with all machine models. Material descriptions are general; product ratings are confirmed through technical assessment.

[1] BASF - Elastollan: general TPU properties

[2] Trelleborg - Airseal: inflatable seal operating principle

[3] Loramendi - Vertical moulding technology

[4] Inflatable Gaskets - Company and contact information

Operating principle: [2]. Machine context: [3]. References checked: 19 October 2026.

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Let’s review your application.

Share your dimensions, existing seal photographs and operating conditions.

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