

Gastrow Injection Molds

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130 Proven Designs

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Preface to the Fourth Edition

For over 35 years, ever since the first edition of this explanatory collection of tried and proven examples of molds, the “Gastrow” has been serving two generations of mold designers and builders as reference work and as a problem solver for design tasks. That is how the new “Gastrow” should be regarded: as a book by the practical and for the practical, containing solutions for problems and design details for configuring injection molds.

For this fourth edition, changes and supplements were once again undertaken with the aim of representing the state of the art. At the same time, our aim was to preserve the knowledge that is “Gastrow’s” lasting heritage. One new feature is a table of contents of all the molded parts produced in the molds described here. Again it was difficult, and not achieved to the degree desired, to obtain new examples of innovative mold building from actual practice for this new edition. The world has changed since “Gastrow”. That may be regrettable, but it is certainly one of the results of “globalization”: more or less justified worries about piracy of brands and products, as well as the worldwide trade in obvious plagiarisms advise us to be cautious. Although almost every mold is one of a kind, many people are shy about revealing their design ideas: copycats pay no development costs.

Nonetheless, the competition for and the education to excellence presuppose the presentation of capabilities. In one way or another, anything that can be purchased can ultimately be duplicated. The know-how embodied in every product often cannot be reconstructed without limitations, or at least not before many attempts to do so have failed. *Creative* entrepreneurs (mold builders) can obtain a competitive edge in this way.

We owe thanks to those who have given their kind assistance in this task along the way.

Spring 2006

The Editor

Preface to the Third Edition

The third English edition of “Gastrow” has been extensively revised to reflect the state of the art, and has also been considerably expanded. Outdated designs have been eliminated to make way for others, and the overall number has now been increased to 130. At the same time, the successful format of the previous editions remains unchanged. Modern technologies such as gas-assisted injection molding have been retained and augmented with others, such as three-component and metal injection molding. The literature references have been expanded, where appropriate, to include major publications.

The new “Gastrow” is the fruit of the labor of a great many authors. The editors would like to take this opportunity to extend their especial thanks to them.

The Editors

Preface to the Second Edition

The second English edition of Gastrow is now here. Since the appearance of the first (German) edition of this interpretative collection of tested and proven mold designs more than twenty-five years ago, this book has served two generations of designers and mold makers as a reference work and problem solver. This is also the intent of this new edition of Gastrow. It was not supposed to be a text book either then or now.

This new edition has been revised extensively. A large number of new molds representing the state of the art have been included. The computational methods given in earlier editions have been eliminated completely, since these are treated in a more up-to-date fashion and in greater detail in other literature (e.g. in Menges, Mohren "How to Make Injection Molds", 2nd edition, Carl Hanser Publishers). Whenever possible, the particular tool steels used have been listed with the respective examples. Accordingly, it appeared necessary to add a new chapter on material selection and surface treatment methods.

The second edition is easier to use: an overview (p. 17) with references to the particular design employed for a given mold simplifies the use of the book. Following the previous tradition, the spectrum of molds presented extends from the simplest design to those exhibiting the highest degree of difficulty. Nevertheless, all molds have one thing in common: each contains some special know-how, and they demonstrate the high technical standards moldmaking has reached today. The editors wish to thank all authors for their contributions to this new "Gastrow" and especially the translator Dr. Kurt Alex who prepared this English edition.

Fall 1992

The Editor

Preface to the First Edition

Hans Gastrow has been publishing examples of mold construction for injection molding since the mid-fifties. These were collected and published in 1966 in the first German edition of this book, which was widely acclaimed because there had been, until then, no other collection of its kind. The injection molding industry stood at the beginning of its great upturn and ideas for constructing good and economically feasible molds were received with great interest. Shortly after the publication of the first edition, Gastrow died. The second edition, published in 1975, kept the objectives set by the first. It does not aim to be a textbook but illustrates selected problems of injection mold construction with interesting and commercially tested solutions. Some of the examples from the original *Gastrow* were retained; others, from younger specialists, were added. The present English translation of the third German edition remains true to this principle. Along with a large number of new examples, principles of construction are also treated. At the time of the second edition's publication, some of them did not possess their present topicality, as for example, hot-runner molds. The solutions to the problems illustrated include molds from the simplest technology to the most complex multi-stage molds.

Summer 1983

The Editor