

Plastics

INDUSTRY

- Continuous Extrusion Blow Machines
- Industrial Accumulator Machines
- Reciprocating Screw Machines
- Time or Position Based Wheel Machines

Blow Molding Application Note

Sophisticated Shapes Demand High Performance

The sophisticated shapes and appearances demanded by users of blow molding machines have placed new burdens on machine controllers. Not only are the new shapes more difficult to produce, they may also demand new resins requiring more precise control during processing and forming. Eurotherm®/Barber-Colman parison control is designed to shorten cycle times, minimize material usage, and improve part production quality and volume. From the venerable MACO® 6000 Series, to the MACO DS/RS and Breeze II to the MACO Compact System, Eurotherm can control even the most demanding blow molding applications.

MACO 6000 Series System

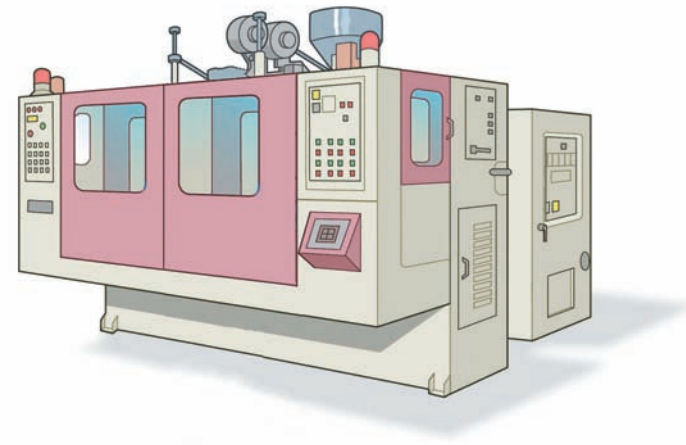
The MACO 6000 Series System offers the advantage of a totally integrated package that includes state of the art closed loop parison process control, clamp control, linear positioning control of machine or auxiliary functions, pressure/flow control, sequential machine control, and built-in timing and counting. All control is integrated in a single 12 or 16 slot chassis, with expansion into multi-chassis (up to 4 chassis) capability available.

MACO DS/RS Series

This totally integrated system is a complete family of building block automation components that can be networked to form a sophisticated blow molding control system. Applied as a total machine controller or as individual components, the MACO DS/RS System meets your needs today, and its adaptability ensures a perfect fit for the future.

MACO Breeze II

The MACO Breeze II controller brings parison only wall thickness control capability to the average operator, and added productivity to blow molders. Just specify the type of machine and the unit will be factory programmed and cabled. Once the unit is installed, calibrate the tool/accumulator and enter the desired parison profile. The 100 point parison profile is displayed graphically on a large display, which allows the profile to be quickly modified and compared to the actual process value. The entered profiles can then be stored internally or on removable USB memory sticks.



Eurotherm – Leading Products in Blow Molding

Our application expertise is key to providing you the right solution. As blow molding has become more sophisticated, support and understanding of your molding process has become a major component of our solution offering. Eurotherm's plastic application specialists, with their highly developed application and automation skills, become extensions of your organization, working to help you optimize your process.

Eurotherm/Continental SSRs and Power Controllers

- Discrete stand alone controls
- Stand alone controls with HMI
- Retrofits



Upgrades from

- MACO 8000 Systems

Upgrades and retrofits from 3rd party products

Eurotherm/Barber-Colman MACO DS/RS System

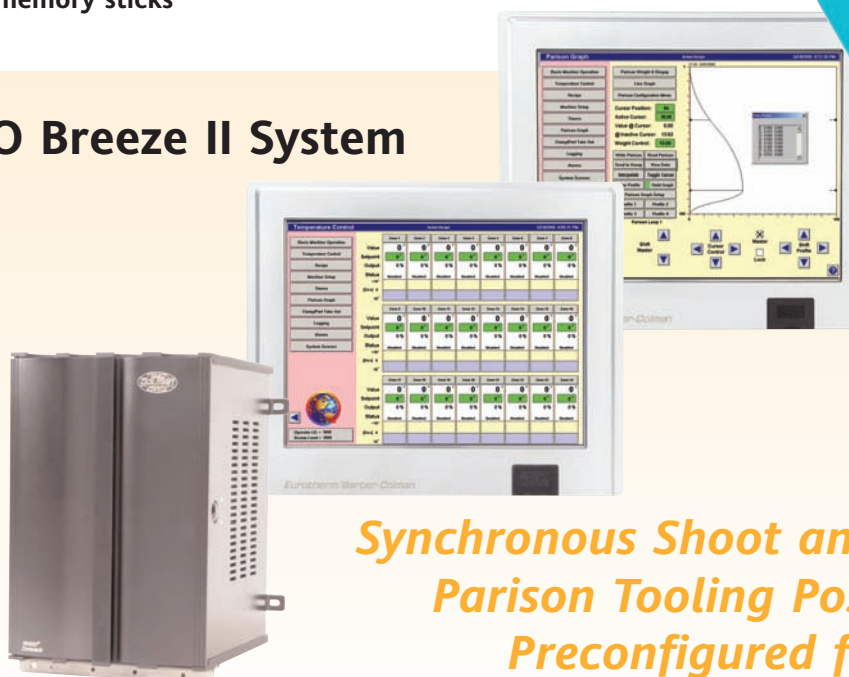
- 100 point parison profile
- 100 point velocity pushout control
- Graphically enter and display the parison profile
- Actual tooling performance versus entered profile display
- Pre-configured for common machines
- Separate weight and diegap settings
- EZ PRO card for high speed closed loop control of carriage and clamp
- Five types of interpolation



- Sends profile to multiple heads
- Profiles and position feedback can be stored internally or on removable USB memory sticks

Blow Molding with the MACO Breeze II System

- High speed display updates
- Ethernet communications
- IEC 1131 sequence logic
- Recipe storage to USB memory sticks
- Large color touchscreen
- Multi-lingual for global use
- Statistical process control

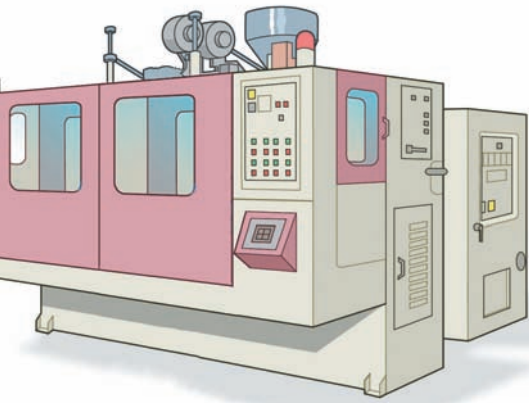


Synchronous Shoot and Parison Tooling Position Preconfigured for

Lifetime Services

Integrated Automation

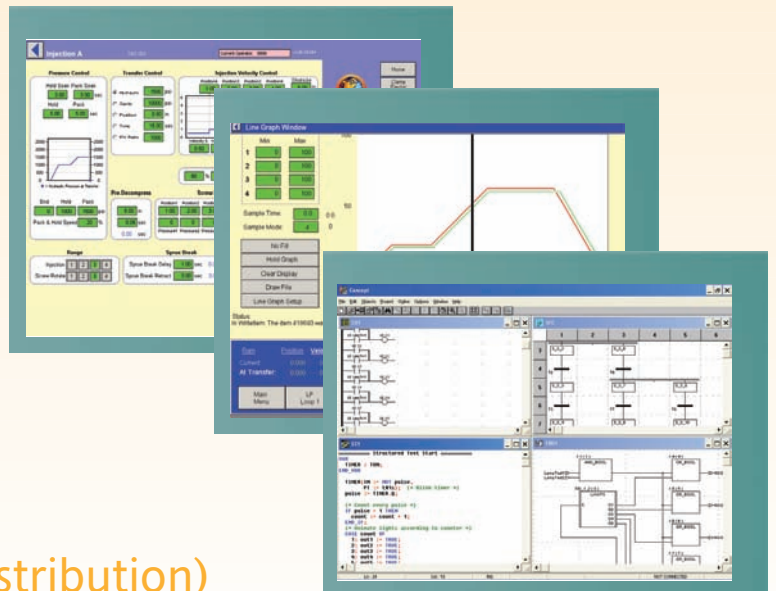
Eurotherm/Barber-Colman MACO 6000 Series System



Discrete Controllers, Drives, Sensors and Terminal I/O



The MACO Breeze II System utilizes the same cards as the MACO DS System, which means that the Breeze II can be expanded to provide total machine control. It also allows users to stock fewer spare parts while providing the highly precise parison control of the MACO DS System. Parison tooling position is updated every 0.1 milliseconds to minimize material usage and improve part quality.



and Fill
Position Updated every 0.1ms
for PWDs (Partial Wall Thickness Distribution)

PC and Web Based Supervisory Packages

Complete, ready-to-run systems for production monitoring and reporting of injection molding, blow molding or extrusion machines. The use of standard hardware and software in an open architecture permits easy expansion when you're ready to grow the system.

- Flexibility to grow from a single machine to an enterprise-wide system
- Complete access to plant data including machine and job status
- Production monitoring, records and reports
- Data acquisition and direct machine control
- Real-time, usable information with an intuitive interface



Eurotherm blow molding control results in material savings based on better control. Plastic prices have increased dramatically over the last few years.

Eurotherm: International sales and service

For more information: Please contact your local Eurotherm office or use the contacts details below.

AUSTRALIA Sydney
Eurotherm Pty. Ltd.
T (+61 2) 9838 0099
F (+61 2) 9838 9288
E info.au@eurotherm.com

AUSTRIA Vienna
Eurotherm GmbH
T (+43 1) 7987601
F (+43 1) 7987605
E info.at@eurotherm.com

BELGIUM & LUXEMBOURG Moha
Eurotherm S.A./N.V.
T (+32) 85 274080
F (+32) 85 274081
E info.be@eurotherm.com

BRAZIL Campinas-SP
Eurotherm Ltda.
T (+5519) 3707 5333
F (+5519) 3707 5345
E info.br@eurotherm.com

DENMARK Copenhagen
Eurotherm Danmark AS
T (+45 70) 234670
F (+45 70) 234660
E info.dk@eurotherm.com

FINLAND Abo
Eurotherm Finland
T (+358) 22506030
F (+358) 22503201
E info.fi@eurotherm.com

FRANCE Lyon
Eurotherm Automation SA
T (+33 478) 664500
F (+33 478) 352490
E info.fr@eurotherm.com

GERMANY Limburg
Eurotherm Deutschland GmbH
T (+49 6431) 2980
F (+49 6431) 298119
E info.de@eurotherm.com

HONG KONG & CHINA
Eurotherm Limited North Point
T (+85 2) 28733826
F (+85 2) 28700148
E info.hk@eurotherm.com

Guangzhou Office
T (+86 20) 8755 5099
F (+86 20) 8755 5831
E info.cn@eurotherm.com

Beijing Office
T (+86 10) 6567 8506
F (+86 10) 6567 8509
E info.cn@eurotherm.com

Shanghai Office
T (+86 21) 6145 1188
F (+86 21) 6145 1187
E info.cn@eurotherm.com

INDIA Chennai
Eurotherm India Limited
T (+91 44) 24961129
F (+91 44) 24961831
E info.in@eurotherm.com

IRELAND Dublin
Eurotherm Ireland Limited
T (+353 1) 4691800
F (+353 1) 4691300
E info.ie@eurotherm.com

ITALY Como
Eurotherm S.r.l.
T (+39 031) 975111
F (+39 031) 977512
E info.it@eurotherm.com

KOREA Seoul
Eurotherm Korea Limited
T (+82 31) 2738507
F (+82 31) 2738508
E info.kr@eurotherm.com

NETHERLANDS Alphen a/d Rijn
Eurotherm B.V.
T (+31 172) 411752
F (+31 172) 417260
E info.nl@eurotherm.com

NORWAY Oslo
Eurotherm A/S
T (+47 67) 592170
F (+47 67) 118301
E info.no@eurotherm.com

POLAND Katowice
Invensys Eurotherm Sp z o.o.
T (+48 32) 2185100
F (+48 32) 2177171
E info.pl@eurotherm.com

SPAIN Madrid
Eurotherm España SA
T (+34 91) 6616001
F (+34 91) 6619093
E info.es@eurotherm.com

SWEDEN Malmo
Eurotherm AB
T (+46 40) 384500
F (+46 40) 384545
E info.se@eurotherm.com

SWITZERLAND Wollerau
Eurotherm Produkte (Schweiz) AG
T (+41 44) 7871040
F (+41 44) 7871044
E info.ch@eurotherm.com

UNITED KINGDOM Worthing
Eurotherm Limited
T (+44 1903) 268500
F (+44 1903) 265982
E info.us@eurotherm.com
www.eurotherm.co.uk

U.S.A. Leesburg VA
Eurotherm Inc.
T (+1 703) 443 0000
F (+1 703) 669 1300
E info.us@eurotherm.com
www.eurotherm.com

ED55

Specialist Plastics Partners:

AUSTRALIA
Remtron Pty Ltd
T (+61 3) 9587 1233
F (+61 3) 9587 4244

CHINA
Gary-Harford
T (+86) 765 7725538
F (+86) 765 7725568

KOREA
MACOs Company, Ltd
T +82 (0)2 529 3078
F +82 (0)2 3462 3078

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