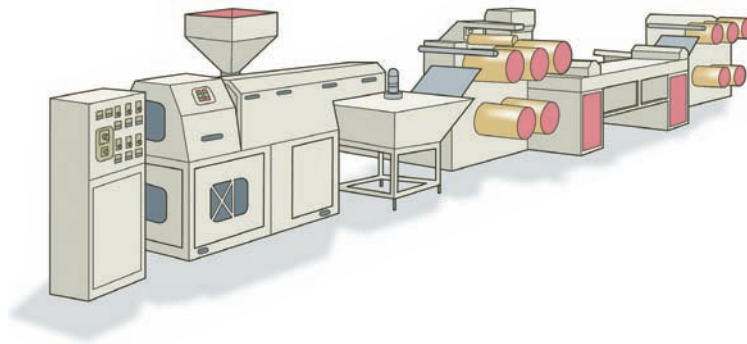


Plastics

INDUSTRY

- Blown Film
- Cast Film
- Rigid Sheet
- Medical Tubing and Packaging
- Rubber Extrusion
- Pipe Extrusion
- Compounding
- Wire and Cable
- Die Bolt Control
- Melt Pressure Control
- Profile Extrusion
- Drive Coordination



Extrusion Application Note

From Single Loop Temperature Control to Turnkey Extruder Lines

Have as much or as little as you need with an extrusion control system from Eurotherm® - no job is too big or too small. Our worldwide network of project engineers will help you design a system that meets your requirements. Specify our proven temperature control only or a complete system including melt temperature control, melt pressure control, sequence logic control, and drive control. Customize your application with machine overview graphics, job scheduling, raw material usage, recipe storage, SPC/SQC, or plant wide networking. Let us help you increase your single-screw, twin-screw, co-extrusion, or blown film productivity. Take a look at the choices.

Extrusion Using the EM-3

The EM-3 offers the advantage of a totally integrated package with the simplicity typically found in single loop temperature or pressure controllers. A building block architecture is used to create an extrusion control system applicable to a large array of extrusion processes.

Standard control system definitions have been developed which save valuable engineering time and expense. Preprogrammed components can be connected for true out-of-the-box performance.

The operator interface is the rugged Optima Touch PC running Wonderware® InTouch™ Visualization Software. This unique application enables clients to accomplish a number of commissioning tasks from the "runtime" environment, eliminating the need for complex programming.

Upgrades from Eurotherm/Barber-Colman Legacy Products

Eurotherm/Barber-Colman leads the plastic market with flexible solutions. Whether you are setting up a new line, upgrading from an existing Eurotherm/Barber-Colman product, or retrofitting from a 3rd party product, our diverse product offering and application expertise assures that each user or machine builder can be uniquely satisfied.



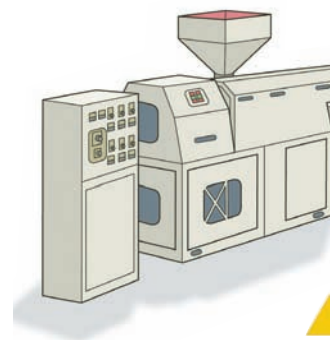
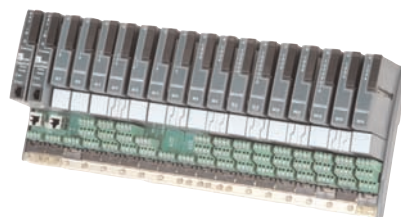
Eurotherm – Extrusion Control – any way you want it

Eurotherm has everything you want for extrusion control - from discrete controllers for temperature or melt pressure control to complete turnkey systems. Panel fabrication, retrofits to replace 3rd party products or legacy Eurotherm and Barber-Colman products - we do it and we do it right.

- Extruder specific temperature control with Self Tune
- Open or closed loop melt pressure control and monitoring
- Line speed control
- Drive interfaces
- Gauge interfaces
- Gravimetric and blending system interfaces

Eurotherm T2550

- Discrete stand alone controls
- Stand alone controls with HMI
- Turnkey systems
- EM-3 extrusion master with on-board PLC
- Panel fabrication
- Retrofits



Eurotherm/Barber-Colman EM-3

Upgrades from

- MACO® 8000 Extrusion Systems
- MACO 5000 Extrusion Systems
- EM-1
- EM-2



Upgrades and retrofits from 3rd party products



MACO Compact EM-3c Extrusion Control

- Adaptive autotuning temperature control
- Preconfigured Wonderware screens
- IEC 1131 sequence logic
- Auto-tuning for melt pressure control
- Direct wiring to terminal I/O blocks
- Multi-lingual for global use
- Ethernet communications



Eurotherm Mini8™ Controller and Eycon™ Visual Supervisor



Discrete Controllers, Drives, Sensors and Terminal I/O



The EM-3c is specifically designed for small extruders. Built-in functions manage temperature, pressure, and line speed. Ramping and bumpless transfer ensures smooth processing. The temperature card is designed specifically for single-screw, twin-screw, co-extrusion or blown film applications. Fully automatic adaptive tuning (as well as conventional tuning) is provided.

Pre-engineered and User Configurable



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



Extrusion control made easy – from single loop temperature control to turnkey extrusion lines

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.uk@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

© Copyright Eurotherm Limited 2008

Invensys, Eurotherm, the Eurotherm logo, Chessell, EurothermSuite, Mini8, Eycan, Eyriss, EPower and Wonderware are trademarks of Invensys plc, its subsidiaries and affiliates. All other brands may be trademarks of their respective owners.

All rights are strictly reserved. No part of this document may be reproduced, modified, or transmitted in any form by any means, nor may it be stored in a retrieval system other than for the purpose to act as an aid in operating the equipment to which the document relates, without the prior written permission of Eurotherm limited.

Eurotherm Limited pursues a policy of continuous development and product improvement. The specifications in this document may therefore be changed without notice. The information in this document is given in good faith, but is intended for guidance only.

Eurotherm Limited will accept no responsibility for any losses arising from errors in this document.

Part No. HA136751 Issue 2



Printed on
recycled paper
in England 01.08