

# barrow III

THE ECO RANGE



# THE ECO RANGE

## “A Lifetime of Reliability and Support”

The ECO range of Preformers and Extruders is ideally suited to all companies requiring a lower investment without having to sacrifice quality, accuracy and productivity. Dramatic savings can be achieved when combining extruding, cutting and check weighing in one machine. Space and power savings are significant since the ECO Range consumes a fraction of the power and occupies only a small amount of floor space when compared with alternative methods.

The accuracy of all ECO Preformers and Extruders is up to +/- 1% by volume and this means that substantial compound savings can be achieved in preform production (and shaped preforms to fit exactly to the shape of the mould greatly reduces the risk of rejects and mould under fills).

The basic principal of the Preformer is to extrude the compound by means of a hydraulically powered ram, the rate of the extrusion is monitored by a digital flow valve and this permits the operator to select precisely the rate at which the rubber is extruded. An inverter controlled variable speed cutter is located on the head of the machine and the extrudate is cut at the die face so variations in die swell do not affect the volumetric accuracy of the preforms.

## The Standard ECO Range has now been upgraded to incorporate the Weigh Scale Loop System

What is the Weigh Scale Loop System?

The machine operator enters the “TARGET” blank weight required on the small onboard Omron screen; here they will also enter a cutter speed and valve setting. When the preformer is started, the operator will place a preformed blank on the weigh scales, if the preformed blank weight does not correspond with the “TARGET” weight, the operator simply presses a button on the weigh scales and this will automatically adjust the cutter speed to bring the blank to the required “TARGET” weight, the operator has to make no physical changes to the machine settings. This new and improved upgrade will ensure that waste compound is now reduced to a minimum.

## The ECO Range offers you:

**A quick return on investment** - normally ensured through savings on material and labour alone.

**Reduced flash, improved flow** - by preforms that are profiled to better fit the mould cavity. Even three-dimensional preforms can be produced.

**Better tolerance to faster accelerators** - as no heat build up during the extrusion process.

**Process versatility** - capable of processing all types of compound from Silicone to Viton, EPDM to Natural, SBR to Butyl and many more.

**One-piece preforms** - which ensure no joint weakness, a feature which is of special interest to ‘O’ ring manufacturers.

**Simultaneous screening** - during extrusion, with many compounds meshes can be fitted to remove material contamination or impurities.

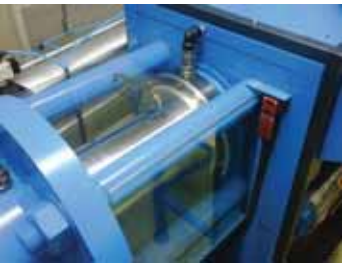
**Minimum recycling of materials** - there are no off-cuts or trimmings which are normally associated with stamping methods.

**A proven technology** - adopted by hundreds of rubber factories throughout the world.

ECO 1



## ECO 20 PLUS



Extended Centre



The Standard ECO Range has now been upgraded to incorporate the Weigh Scale Loop System

## Industries served

- Automotive
- Footwear
- Sports
- Leisure
- Agriculture
- Masterbatch
- Extrusion profiling
- Pharmaceutical
- O Ring & Oil Seal
- General goods
- TPE/EVA
- Construction
- Pelletizing



GP Head

## ECO 5 PLUS



ECO Touch Screen



ECO+ Touch Screen

- Simultaneous screening available during preforming
- Simple installation
- Easy maintenance
- Low investment

## ECO 20



### Standard features of the ECO

- Touch screen operator interface
- Variable AC inverter controlled cutter
- Speeds up to 800 cuts per minute (single blade)
- Powerpack hydraulics with proportional flow control
- Standard operating pressure of 210 bar (3,000psi)
- Weigh scale feedback loop for blank weight control
- Simple design for ease of maintenance and service
- Preform accuracy up to +/- 1% by volume
- Cut to length (pulse cut) facility
- ECO+ 2,000 product database on removable "Flash memory"
- ECO+ manual or automatic cycle
- ECO+ extended centre
- ECO+ reversing conveyer

### Optional extras

- 240 bar (3,500psi) or 350 bar operating pressure
- Rear loading

### Touch Screen Interface

- Graphic & text display
- ECO 3" mono screen
- ECO+ 8" TFT visible colour screen
- Multi - language support (e.g. English, Chinese, Korean, Japanese, Russian etc).
- Password level protection
- Touch panel input data
- RS232 connection to weigh scales



SH Head



## ECO 40



# moulding the future

The H series (5000 PSI) of High Pressure Preformers have been developed to meet an increasing demand from the rubber industry for machines capable of processing tough or special materials at production rates that are not achievable with the standard range of Barwell Preformers.

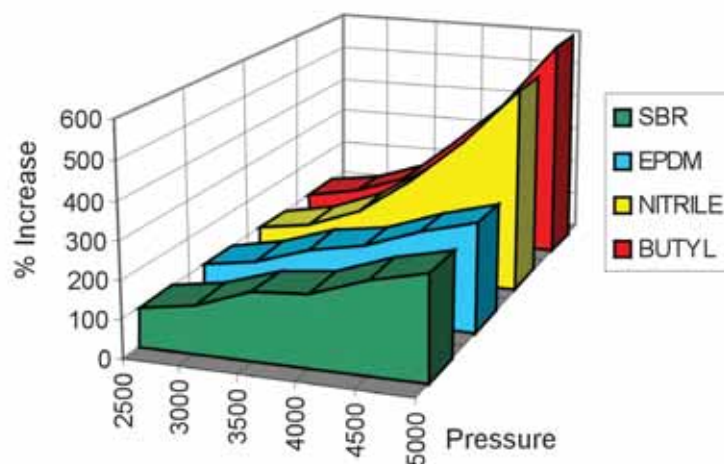
Up to 6 times more output than a standard 210bar (3,000psi) machine.

This requirement has become more important where screening or filtering of materials is essential to reduce or eliminate contamination and remove impurities within the material.

Although screening or filtering of materials has always been possible with any Barwell machine, the effect of this was to reduce outputs to sometimes unacceptable levels. The H series, with its increased compound extrusion pressure up to 350 Bar (5,000psi) overcomes this restriction and allows production demands to be met without compromise.

## Higher Output

The chart indicates the potential increases for various materials, although actual rates for a specific product would need to be clearly defined through material testing on our demonstration machine and subject to die size and whether screening is applied or not.



ECO Technical Data	ECO-1	ECO-2	ECO-5	ECO-20	ECO-40	ECO-40R	ECO-60	ECO-60R	ECO-80
Length ECO	1380 mm	2060 mm	2730 mm	3520 mm	4440 mm	5050 mm	5050 mm	6030 mm	6030 mm
Length ECO Plus	N/A	N/A	2860 mm	4060 mm	5000 mm	5800 mm	5800 mm	6900 mm	6900 mm
Width	910 mm	910 mm	915 mm	1100 mm	1100 mm	1100 mm	1100 mm	1100 mm	1100 mm
Height	1280 mm	1280 mm	1700 mm	1750 mm	1750 mm	1750 mm	1750 mm	1750 mm	1750 mm
Weight	450kg	500kg	880kg	3000kg	3800kg	3800kg	3800kg	4200kg	4200kg
Batch Size	1L	2L	5L	20L	40L	40L	60L	60L	80L
Head Options	GP	GP	GP	GP	GP/SH	GP/SH	GP/SH	GP/SH	GP/SH
Load Position	Front	Front	Front	Front	Front	Rear	Front	Rear	Front
Front Die Change	No	No	No	No	Yes	Yes	Yes	Yes	Yes
Barrel Diameter	80 mm	80 mm	100 mm	200 mm	250 mm	250 mm	250 mm	250 mm	250 mm
Maximum Output/Hour	20kg	30kg	75kg	270kg	450kg	600kg	650kg	650kg	700kg
Maximum Die Size	48 mm	48 mm	76 mm	127 mm	190 mm	190 mm	190 mm	190 mm	190 mm
Maximum Blank Weight	50g	50g	100g	300g	2000kg	2000g	2000g	2000g	2000g
Total Power	4kw	5kw	13kw	19kw	26kw	30kw	30kw	30kw	30kw
Oil Reservoir	20L	20L	60L	200L	200L	200L	200L	240L	240L
Air Supply	N/A	N/A	N/A	6-10 bar	6-10 bar	6-10 bar	6-10 bar	6-10 bar	6-10 bar
Water Supply (at 25°C)	15 L/min	15 L/min	15 L/min	20 L/min	35 L/min	35 L/min	35 L/min	35 L/min	35 L/min

# barwell



## moulding the future

### Barwell Global Ltd



#### Head Office

Atria Court  
60 Papworth Business Park  
Stirling Way  
Papworth Everard • Cambs  
CB23 3GY • England  
Tel: +44 (0) 845 224 3541  
Fax: +44 (0) 845 224 3531  
E-mail: [info@barwell.com](mailto:info@barwell.com)  
Web Site: [www.barwell.com](http://www.barwell.com)



#### China

Barwell China  
Room 502  
No. 1 Lane 600, Tianshan Rd  
Shanghai  
China  
200051  
Tel: +86 21 611 39 270  
E-mail: [tsequip@126.com](mailto:tsequip@126.com)  
Web Site: [www.barwell.com](http://www.barwell.com)



#### USA Canada & Mexico

Barwell Machinery USA  
2868 Westway Drive  
Brunswick  
Ohio 44212  
USA  
Tel: +1 330 225 9500  
Fax: +1 330 225 9555  
E-mail: [bgomola@barwellmachinery.com](mailto:bgomola@barwellmachinery.com)  
Web Site: [www.barwell.com](http://www.barwell.com)



#### Brasil

Barwell Do Brasil  
Equipamentos Para Borracha Ltda  
Edificio Columbia Office Center  
Av. Jabaquara • 2819  
Bairro: Mirandopolis • 0405-004 SAO  
Tel: +55 11 5589 7168 / 5071 2983  
Fax: +55 11 3848 0903  
E-mail: [amissi@barwelldobrasil.com.br](mailto:amissi@barwelldobrasil.com.br)  
Web Site: [www.barwell.com](http://www.barwell.com)