



Blow Moulding Instructions (Comprehensive Version)

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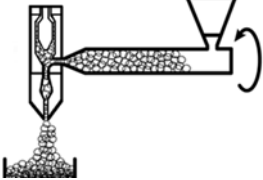

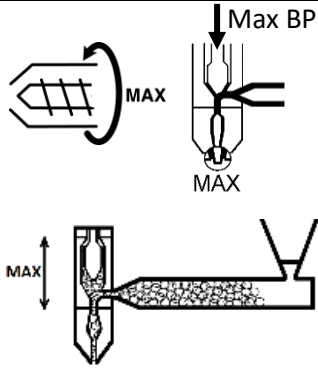
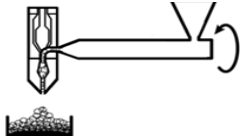



Grade Selection

PCP 100 (inc LR & HB)	- Small Container Multi-Layer Heads - Continuous Extrusion with Worn Screws or Barrels
PCP HMEX (inc LR & HB)	- Continuous Extrusion (Enhanced Cleaning) - Accumulator Blow Moulding
PCP FT (inc LR & HB)	- UN Material - 6/7 Layer Fuel Tank Regrind Layer Cleaning

Aquapurge products are not intended to be incorporated in finished plastic goods. In the view of the many factors that may affect processing and application, users should make their own independent determination that the products are suitable for their intended use and can be used safely and legally.

Blow Moulding Colour Change Procedure

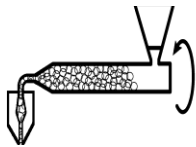

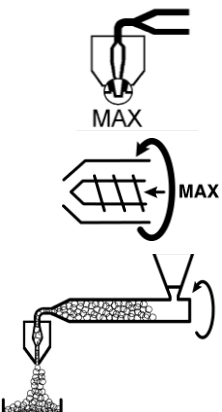
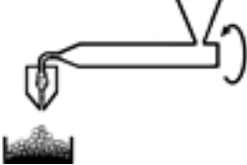
(Accumulator)

Steps 1, 2 & 3 for PCP Purging Procedure		
1		<p>(Note: Remove Screens / Filters) With clean hoppers and screw empty add PCP to the extruder and purge until evident at the die exit</p>  <p style="text-align: center;">For HB grades, add air to the bag and shake to mix contents prior to use</p>
2		<ul style="list-style-type: none"> - Open die gap to maximum - Increase Back Pressure on accumulator to maximum (Back Pressure - Max, Filling Pressure - Max, Pack Pressure – Max, Filling Speed – Zero) - Increase screw speed to SAFE maximum - Extrude until parison completely white - Reduce Back Pressure to running conditions - Increase stroke of Accumulator to Maximum - Fill accumulator and empty until parison fully white
3		<p>Empty the machine completely until purge stops exiting the die, the accumulator is empty and pressure reduces to below 60 bar</p>
Steps 4 and 5 for PCP Clearing Procedure		
4		<p>“Starve-Feed” with the <u>next production material</u> 5 times (fill the hopper throat and empty the hopper throat 5 times), then empty the machine completely</p>
5		<p>Continue with the next production material until all evidence of PCP is removed, then reset die gap, accumulator stroke and screw speed</p>
Step 6 for End of Use and Storage		
6		<ul style="list-style-type: none"> - Do not leave the bag open once used - Reseal any unused bags with the cable tie provided - Store PCP as to SDS information



Blow Moulding Colour Change Procedure

(Continuous Extrusion)


Steps 1, 2 & 3 for PCP Purging Procedure

1		<p>(Note: Remove Screens / Filters) With clean hoppers and screw empty add PCP to the extruder and purge until evident at the die exit</p>  <p>For HB grades, add air to the bag and shake to mix contents prior to use</p>
2		<ul style="list-style-type: none"> - Open die gap to maximum - Increase screw speed to SAFE maximum - Purge until PCP shows no signs of previous colour (generally less than 10% of the normal HDPE volume required)
3		<p>Empty the machine completely until purge stops exiting the die and pressure reduces to below 60 bar</p>

Steps 4 and 5 for PCP Clearing Procedure

4		<p>“Starve-Feed” with the <u>next production material</u> 5 times (fill the hopper throat and empty the hopper throat 5 times), then empty the machine completely</p>
5		<p>Continue with the next production material until all evidence of PCP is removed, then reset die gap and screw speed</p>

Step 6 for End of Use and Storage

6		<ul style="list-style-type: none"> - Do not leave the bag open once used - Reseal any unused bags with the cable tie provided - Store PCP as to SDS information
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Carbon Removal

PCP can be used in several ways depending on the planned implementation or the severity of your carbon issue:

Determining usage when using Preventative Maintenance over Planned Shutdowns:

The procedure to use for this is determined by the time of producing reject parts of black spots that the machine produces after a cold start-up.

- a) 0 – 1 hour
- b) 1 – 4 hours
- c) 4 – 8 hours
- d) Over 8 hours

a) 0 – 1 hours scrap

Flush through with **PCP** on startup to clear loosened carbon
(Steps **1 to 5** with Step **2** to include removing all carbon)

b) 1 – 4 hours scrap

Shut down with **PCP**
(Steps **1 to 3**, then turn the temperatures off)

c) 4 – 8 hours scrap

Shutdown with **PCP** (Steps **1 to 3**, then turn the temperatures off)

Flush through with **PCP** on startup to clear loosened carbon
(Steps **1 to 5** with Step **2** to include removing all carbon)

d) Over 8 hours

The following procedure can be used only if the start-up production is Black;

Shutdown with **PCP**
(Steps **1 to 3**, then turn the temperatures off)

Flush through with **PCP** on start-up to clear loosened carbon
(Steps **1 to 5** with Step **2** to include removing all carbon)

If it is not possible to start in Black, a MegaClean should be considered as large number of rejects are expected.



i) Procedures for Removing Carbon Depending on Severity

- i) Highlights large deposits hiding in your machine during the Colour Change Procedure
- ii) Stops heat sensitive materials degrading using the Safe Shutdown Procedure
- iii) Clears small carbon issues by flush through
- iv) Removes medium build-up with a 2-hour soak
- v) Loosens and removes stubborn carbon deposits during a Decarbonising Procedure
- vi) Removes the most catastrophic carbon build-up
(such as build-up in the regrind layer of 6/7 layer fuel tanks) using the MegaClean Procedure

ii) Safe Shutdown

- Follow Colour Changing Procedure **1 – 3**
- Steps **4 and 5** use a stable material as the next material such as natural HDPE
- The machine is now ready to stop

iii) Flush Through

- Follow Colour Changing Procedure **1 – 2**
- Once colour is gone reduce the die gap to increase pressure (70 - 90% of allowable) in the head and continue purging until all evidence of carbon is removed
- Continue with Colour Changing Procedure steps **3 – 5**

iv) Two Hour Soak

- Follow Colour Changing Procedure **1 – 3**
- Stop the machine for 2 hours
- Follow Colour Changing Procedure **1 – 2** with reduced die gap to increase pressure (70 - 90% of allowable) in the head and continue purging until all evidence of carbon is removed
- Continue with Colour Changing Procedure steps **3 – 5**

v) Decarbonising Procedure

- Follow Colour Changing procedure **1 – 3** to prime the machine
- Turn machine off and let the centre of the head reduce to **at least 80°C**
- Increase the temperatures and follow all safety protocol before re-purging
- Follow Colour Changing Procedure **1 – 2** with reduced die gap to increase pressure (70 - 90% of allowable) in the head and continue purging until all evidence of carbon is removed
- Continue with Colour Changing Procedure steps **3 – 5**

vi) MegaClean

- Assortment of Decarbonising and Hot Soak Procedures
- Contact Aquapurge for advice

Safety Precaution



Do not use PCP for material with processing temperatures below 160°C



Do not use PCP for material with processing temperatures above 290°C



PPE

Wear suitable protective clothing when cleaning down equipment, using, handling or viewing the hot or cold **PCP**



If contact with skin occurs, wash with cool water



In case of eye contact, irrigate with plenty of cool water



Do not swallow product



In situations of excessive shear heat place purgings in cool water to eliminate fumes