# **Smart**TRASHER





A "pleasure to use" domestic recycling appliance that "minimises recycling frustrations"!

#### **Smart**TRASHER .... The concept

- SmartTRASHER, the brainchild of a Scottish farm based Engineer.
- Unique, home appliance capable of handling manually sorted separation of high value recyclable domestic waste material.
- Initial design concept was capable of handling ....
  - **★** Four (4) colours of glass.
  - \* Steel cans.
  - \* Aluminium cans.
  - \* Plastic packaging.
  - **\*** 1.5 litre plastic drinks bottles.
  - **★** Organic waste storage container.

#### **Smart**TRASHER Concept .... Prototype 1

Prototype 1 was capable of meeting ALL the concept requirements for handling glass, steel, aluminium, 1.5 liter plastic bottles and storing organic waste.

Unique folding door sorting hopper ensures glass was handled safely and patented compaction compartment ensures that glass was easily split and crushed.

Health and safety issues with the collection of crushed glass saw an appliance redesign.



#### **Smart**TRASHER Concept .... Redesign

- SmartTRASHER appliance redesign enabled a KEY upgrade and considerable feature improvement due to the removal of glass handling.
  - **★** General redesign to a new two (2) drawers layout.
  - \* Reduce total number of individual components.
  - \* Increase sorting compartment capacity to handle UK 6 pint milk containers.
  - \* Increased storage capacity with lower drawer storage bin redesign.

#### **Smart**TRASHER Concept – Prototype 2

Prototype 2 completed extensive testing to prove the concept prior to a major public launch at Grand Design Live, 2011 in London.

With an attendance of in excess of 100,000 people, *Smart*TRASHER was well received by the recycling professionals, kitchen suppliers, kitchen designers professional accommodation managers and the general public at large.





#### **Smart**TRASHER .... the appliance



**Smart**TRASHER incorporates KEY features ensuring it meets the requirement of being a "pleasure to use"

- \* Simple, plug in installation.
- \* Slide open top sorting drawer with five (5) individual compartments and organics storage.
- \* Simple single control panel.
- \* Slide open bottom drawer with five (5) individual storage bins incorporating carry handles

#### **Smart**TRASHER .... Integrated or stand alone

**Smart**TRASHER's intelligent design allows it to be supplied to meet two (2) key separate installation applications.

Integrated into an off the shelf or bespoke kitchen design, SmartTRASHER's 600 mm domestic appliance dimensions make it easy to "fit in".

For applications where kitchen space is a premium, in stand alone format *Smart*TRASHER can be plugged in almost anywhere.

Appliance dimensions in millimeters.
597 wide x 575 deep x 850 high.



## **Smart**TRASHER .... Easy Load



**Smart**TRASHER's top drawer slides out allowing full and easy access to the sorting compartments.

Five (5) sorting compartments are individually decaled to meet the recycling requirements of each users local area.

As recycling requirements change, the sorting compartments can be re decaled to meet revised recycling requirements.

#### **Smart**TRASHER .... Sorting compartments

# Four (4) identical sorting compartments.

115 wide x 150 long x 230 mm high. 3967cm<sup>3</sup> (approx 4 lit capacity each)

#### One large sorting compartment.

115 wide x 388 long x 230mm high. 10,262cm<sup>3</sup> (approx 10.2 lit capacity)

One (1) lift out non compacting organics storage bin with incorporated handle, lid and liquid removal, pouring slot.

8 litre storage capacity



#### **Smart**TRASHER .... Control panel



**Smart**TRASHER features a single control panel located inside the top drawer.

Simple to use *Smart*TRASHER ONLY compacts when switched on and all safety features are automatically checked and operational.

Warning lights advise if any bottom drawer recycling bins are missing or full.

SmanTRASHER can be loaded BUT will not compact until warning light issue is rectified.

## **Smart**TRASHER .... Organics storage

The single, eight litre capacity Organics storage container bin allows convenient storage of valuable organics waste until it can be placed into a recycling System.

A built in handle makes the container simple and easy to remove.

Designed to intelligent dimensions, the organics bin can be washed out in a small UK sink or placed into a dishwasher when being cleaned.



#### **Smart**TRASHER .... Compaction

With safety being paramount, SmartTRASHER can only compact sorted material when switched on and the top drawer is fully closed.

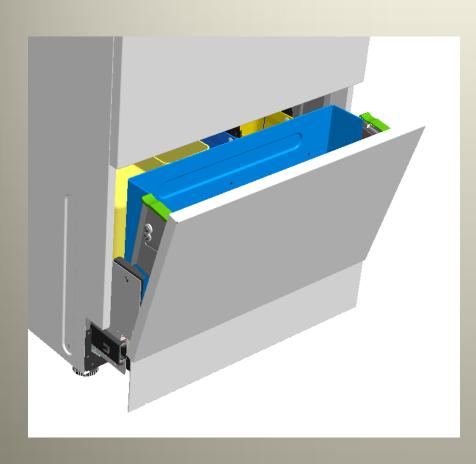
When safety circuits are automatically checked and confirmed OK, *Smart*TRASHER begins the compacting cycle.

110/240 Volt electric motor drives the food grade oil hydraulic system powering the compacting cylinder.

With a total cycle time of approximately 30 seconds including a 4 second hold, the appliance generates a maximum noise level of 85 dBA.



## **Smart**TRASHER .... Card storage



Locked with twin (2) child locks, the bottom drawer incorporates a cardboard storage area.

Lift the locks and gain access to the card storage area.

Cardboard packaging can be stored in this 500 wide x 230 mm high storage area. Opening to a maximum of 167 mm gives a compaction feature allowing folded card to remain flat.

Normally 81mm deep when closed, the card storage area can adequately hold up to forty (40) family sized cereal boxes.

#### **Smart**TRASHER .... Recycled Material Storage

A total of five (5) individual recycled material storage bins are located in the bottom drawer.

Depress the twin child locks downwards, to allow the bottom drawer to slide fully out.

Each of the five (5) bins incorporates its own carry handle.

Four (4) equal sized different coloured bins each have an 8.2 litre capacity. Bin full switches are activated when bin capacity reaches 6.2 litres.



#### **Smart**TRASHER .... Recycled material storage



The single (1) large recycle storage bin also incorporates its own carry handle.

With an opening of 127 wide x 380 mm long, the bin has a capacity of almost 30 litres.

A bin full switch is activated when a capacity of 25 litres is reached.

Given the bins design, compacted plastic containers have attendance to remain compacted rather reform their original shape.

#### **Smart**TRASHER .... Safety features

A series of clever safety features have been built into the *Smart*TRASHER appliance. These include....

Mechanical interlock to ensure that only one drawer can be opened at a time.

Child locks restricting access to the bottom drawer.

Compaction only when the top drawer is fully closed, design feature.

Warning lights on main control panel to advise when bins are missing or full. **Smart**TRASHER will not compact until the warned issue is corrected



### **Smart**TRASHER .... Electrical components



With common sense playing a key role in the design of the *Smart*TRASHER appliance, its application can be seen throughout its construction.

All electrical components are grouped conveniently behind a safety panel at the rear of the appliance.

Where possible, the components are off the shelf minimising costs by using volume components.

#### **Smart**TRASHER .... Power consumption

Designed to have a short cycle time, *Smart*TRASHER has a low power requirement.

Measures test with a power consumption meter confirm that at the UK peak rate Electricity charge, a minimum of ten (10) crush's for £0.01 are achievable.

electronic design sees a maximum power consumption for a limited period only, at the end of the crushing stroke.



### **Smart**TRASHER .... Smart crushing





Many compactors are available on the market, however SmartTRASHER is in a league of its own, ahead of the competition.

Incorporating numerous patented features, *Smart*TRASHER sorts, compacts and stores valuable recyclable material.

Compacting side on, sees

SmartTRASHER present
compacted material in a
condition that allows paper and
plastic labels easily removable in
the downstream recycling
process.

# **Smart**TRASHER





# **Smart**LIVING

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