# ALAN HARPER COMPOSITES

# e-brochure

To assist clients in identifying by process the essential products and equipment for successful Reusable Vacuum Membrane manufacture and use

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VERSION 1.0

# CALIBRATION MATERIALS

**102151**
**15mm Sheet Wax**
Use to calibrate cavity between mould face and membrane

**102104**
**Reusable Seal Profile**
Use to create perimeter vacuum channel and silicone saving moulded edge

**102122**
**Wax Strip Cutter**
Use to cut thin wax strips for breather vacuum lines

**102152**
**Wax Moulding Dough Sulphur Free**
Use to tidy and fill imperfections in calibration

**102110**
**Double Sided Tape**
Use to temporarily bond seal profile to mould tool

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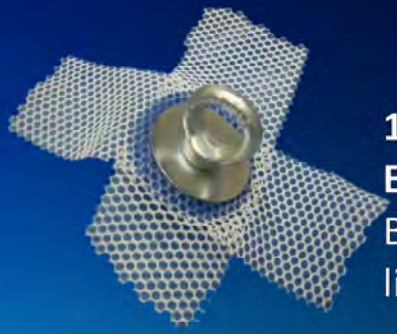
# MEMBRANE MANUFACTURE ESSENTIALS

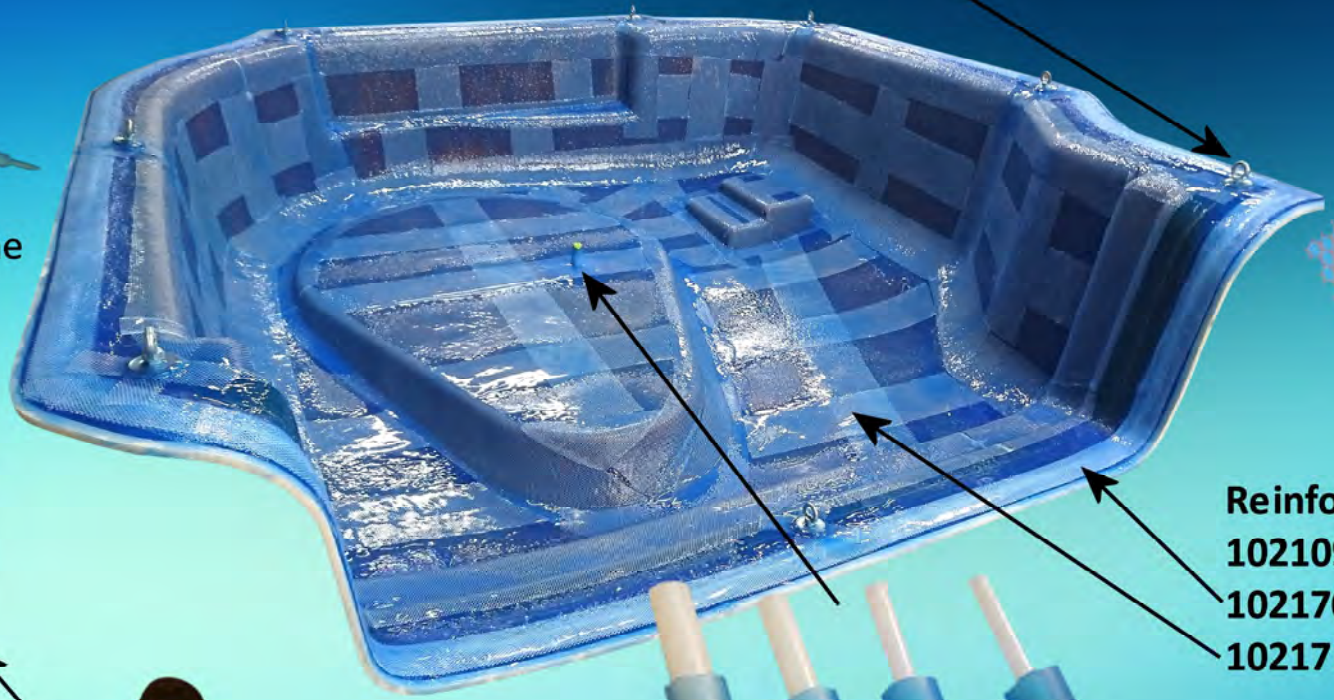
**102289**
**TopGear SilCon SIX**
Silicone spray machine

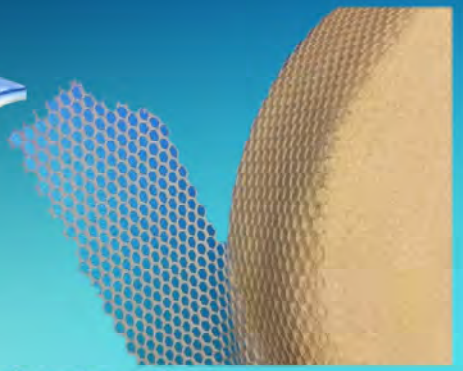


**102150**
**Eco Anchor**
Built into membrane lifting eye

**102174**
**Brush On Starter Kit**
Complete kit with instructions to create up to 1.4m2 vacuum membrane

**102114**
**Disposable Mixer**
Silicone spray machine mixer nozzel





**Reinforcing Cloth**
**102109 Sheet per m2**
**102170 50mm wide x 100m roll**
**102171 100mm wide x 100m roll**

**VBS26-35 Silicone**
The best of British platinum cure silicone

**102164**
**TA50 Thixotropic Additive 30g**
Use to rapidly produce silicone paste

**102182**
**Moulded Silicone Membrane Inserts**
**10, 12, 16 & 19mm**

**102176**
**Insert Moulding Kit**
Mould your own inserts, all sizes included plus instructions

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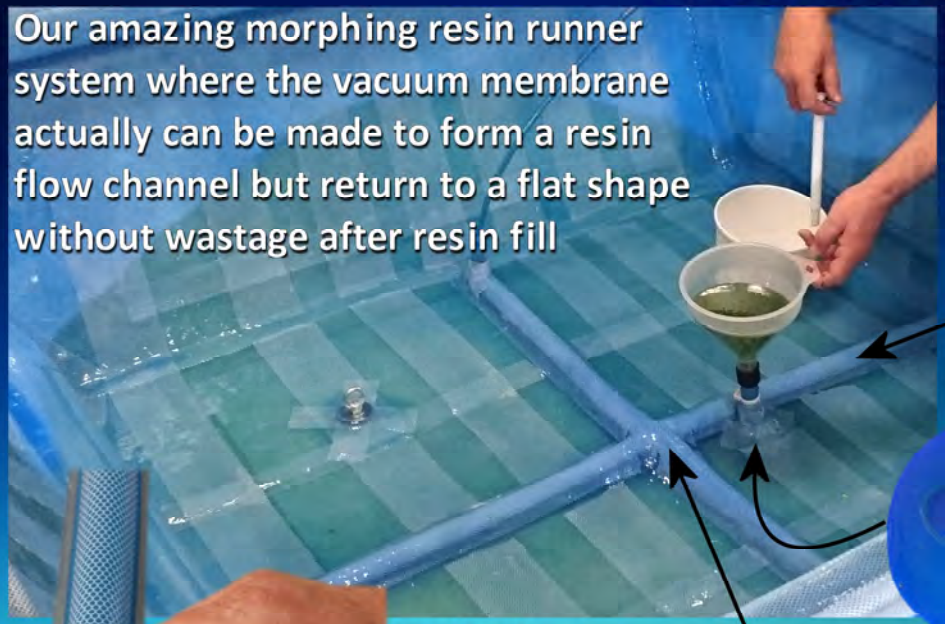
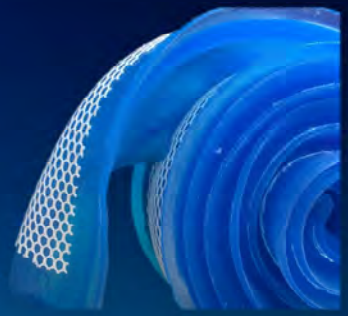
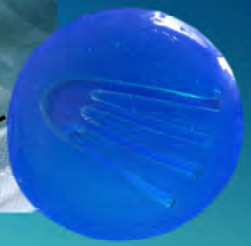
# MOULDED INTO MEMBRANE FLOW MEDIA

Our amazing morphing resin runner system where the vacuum membrane actually can be made to form a resin flow channel but return to a flat shape without wastage after resin fill



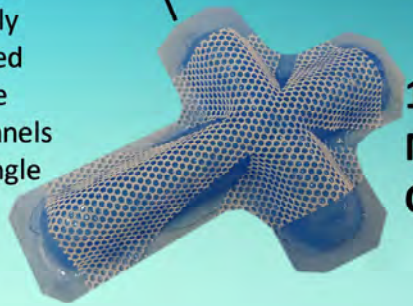


**102175**
**Morph Runner 2m**
Seamless built in resin path within a reusable vacuum membrane



**102183**
**Crows Foot Resin Feed**
Used to deliver resin into Morph Runner

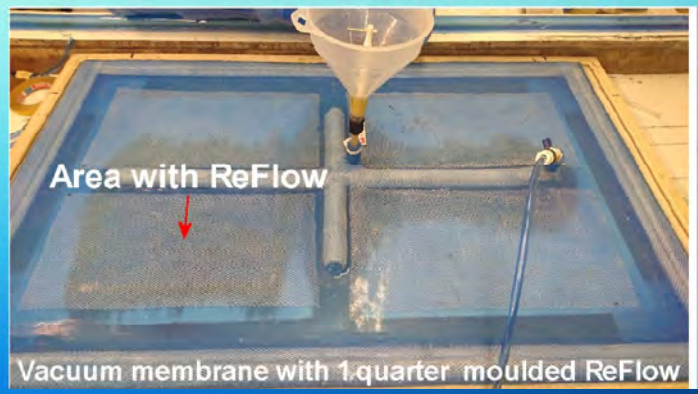
The Morph runner system can easily be cut and pasted to form multiple networked channels filling from a single injection insert and controlled with a single vacuum point



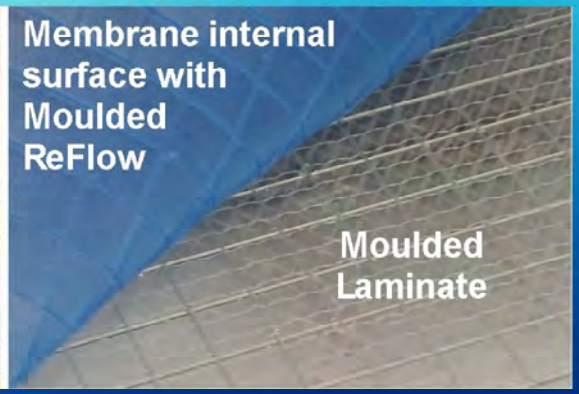
**102177**
**Morph Runner Cross Junction**

**102153 ReFlow**

ReFlow - Use to create a moulded into membrane reusable flow mesh




Vacuum membrane with 1 quarter moulded ReFlow

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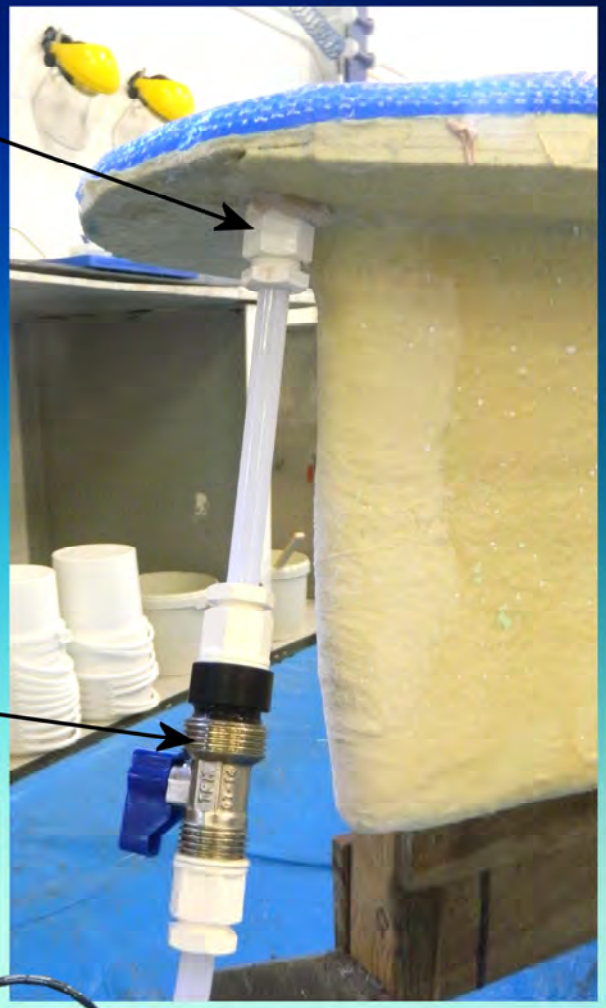
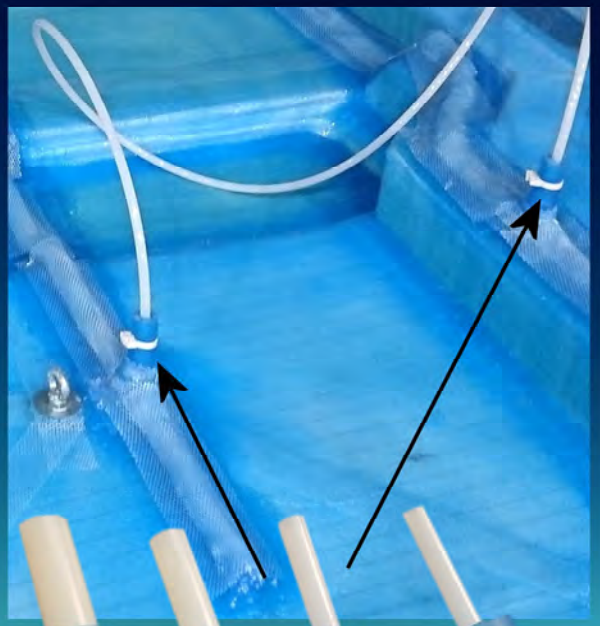
# VACUUM FITTINGS & PUMPS

**102118**
**Vacuum Connector**
For installation into rigid face mould flange



**102181**
**Vacuum Isolation Valve**

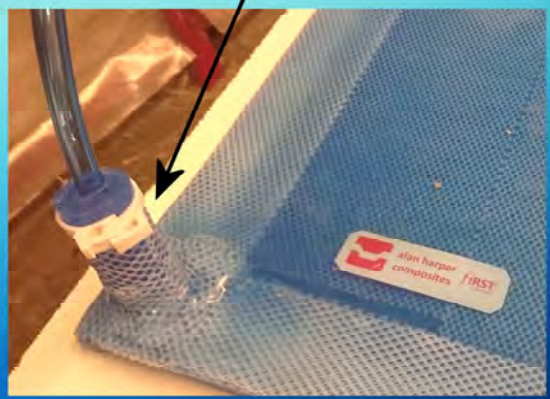


**102182 Moulded Silicone Inserts**
**Use for built into membrane vacumm connection**

**102124 ClearVac**
Vacuum chamber and catchpot

**102123**
**Vacuum Test Plug**

**102288**
**MiniVac Station**
Complete vacuum pump with catch pot and gauge



**102160**
**TwoVac T**

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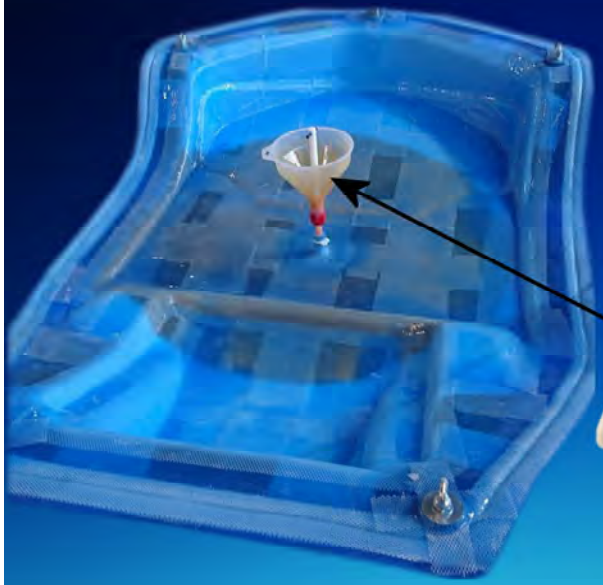
# RESIN INJECTION



**Injection Hopper Funnels**
**102141** - 10mm large
**102143** - 10mm small
**102161** - 16mm HiFlo
**102167** - 19mm MegaFlo

**PTFE Plug Stoppers**
**For Hopper Funnels**
**102142** - 10mm
**102162** - 16mm HiFlo
**102166** - 19mm MegaFlo

**102182**
**Moulded silicone Inserts**
**10,12,16 & 19mm**

**102178**
**Reusable Pipe Clip**
Instant hand locked ratchet clamps

**102182 Moulded Inserts also used for vacuum connection**

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# HEATER CLOTH FOR IN-MEMBRANE ELECTRICAL HEATING

The in-membrane electrical heating we offer incorporates the heat source directly next to the moulded part. With low thermal mass, offers enormous energy savings over traditional large scale industrial ovens and quicker heat up and cool down times all advantages that lead to faster cycle times. The low cost embedded heater cloth allows temperatures to be gained above 240C at low wattage and safe low voltages. Heat up times of 100C in 5 minutes are achievable and the unique feature of the heater cloth is that it can stretch and conform to different laminate schedules and thicknesses.

**102154**
**15cm Wide**
**Heater Cloth**

**102155**
**30cm Wide**
**Heater Cloth**

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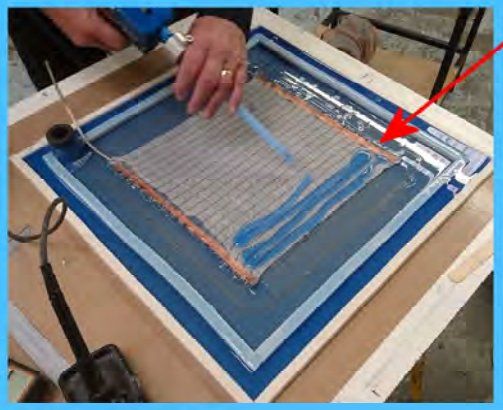
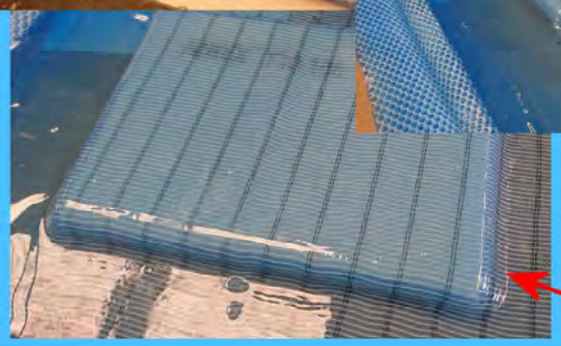


Embedding heater cloth in silicone vacuum membrane

Fitted to back side of composite mould

Vacuum sealing channel

Heated membrane under vacuum



Heater cloth embedded in silicone vacuum membrane will stretch and conform to different laminate thicknesses

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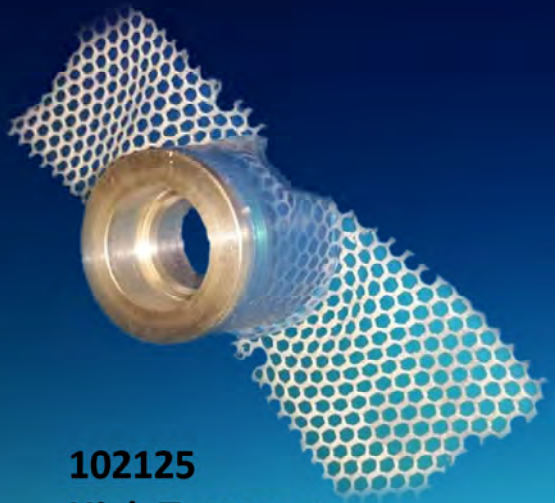
# HIGH TEMPERATURE & AUTOCLAVE

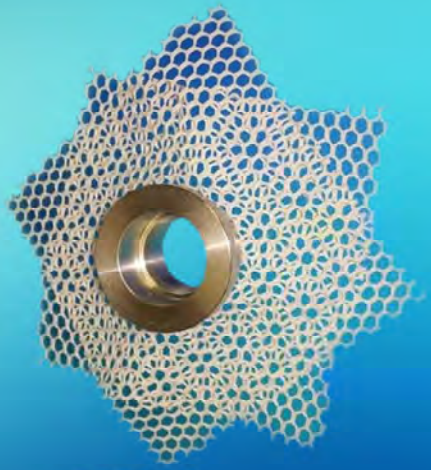
**102148 Autoclave Anti Collapse Spring**
Use to support edge seal cavity at higher pressures within autoclave



**102125**
**High Temperature**
**Alloy Saddle Insert**
Use to inject resin into resin runner

**102138**
**High Temperature**
**Injection / Vacuum Fitting**
Use with high temp alloy membrane & saddle inserts

**102182 All Temperatures Moulded Membrane Inserts**
Injection / Vacuum Inserts
Available for 10, 12, 16 & 19mm tube



**102139**
**High Temperature**
**Alloy Membrane Insert**

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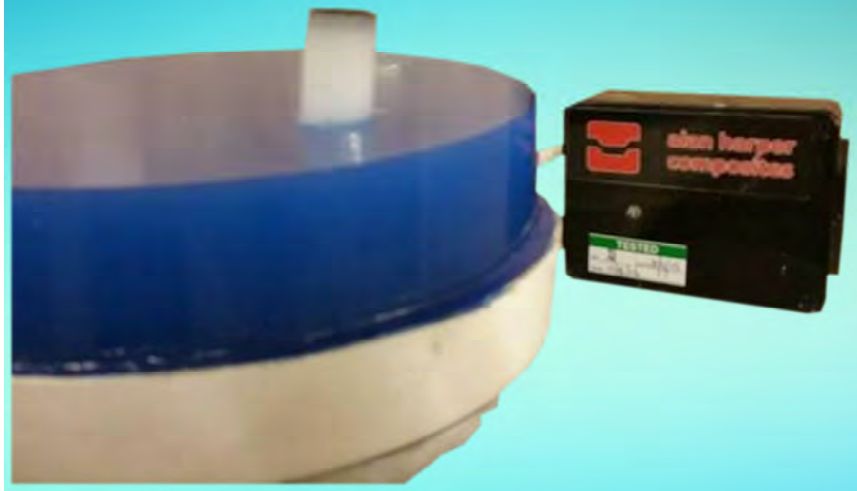
# TOPGEAR SPRAY MACHINE SPARES & ACCESSORIES

**102114**
**Disposable Mixer Nozzle**

**102119**
**Disposable Angled Spray Tip**
Use to spray in hard to reach areas




**102112**
**Quick Coupler**
Air connector for mixer head spray nozzle

**102111**
**Spray Nozzel**
**Reusable mixer tip**

**102168**
**Tank Low Level Alarm**
Long life battery operated tank level alarm system. Can be factory fitted or retrospectively added

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# MISCELLANEOUS

**102290**
**TopGear Six Compact Flight Model**
Smaller portable silicone spray machine designed to safely travel in aircraft cargo hold

**102106 Silicone Cord**
**8.5mm Diameter**
Use for split mould and return flange vacuum sealing

**102186**
**Magloc Ejector**
Composite mould air ejector

**102127**
**Hand Wipe Power Towel**
Low cost hand wipes ideally suited for silicone cleaning

**Silcoset 153**
Reusable vacuum membrane repair kit
**102113 75g**
**102121 310g**

**SILFLON** a low cost coating to extend the life of a reusable vacuum membrane, particularly useful for epoxy resin users
**102163 125g**
**102172 510g**

**PLE58R**
**Pot Life Extender**
Use when mixing brush on silicone to extend workable time

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