

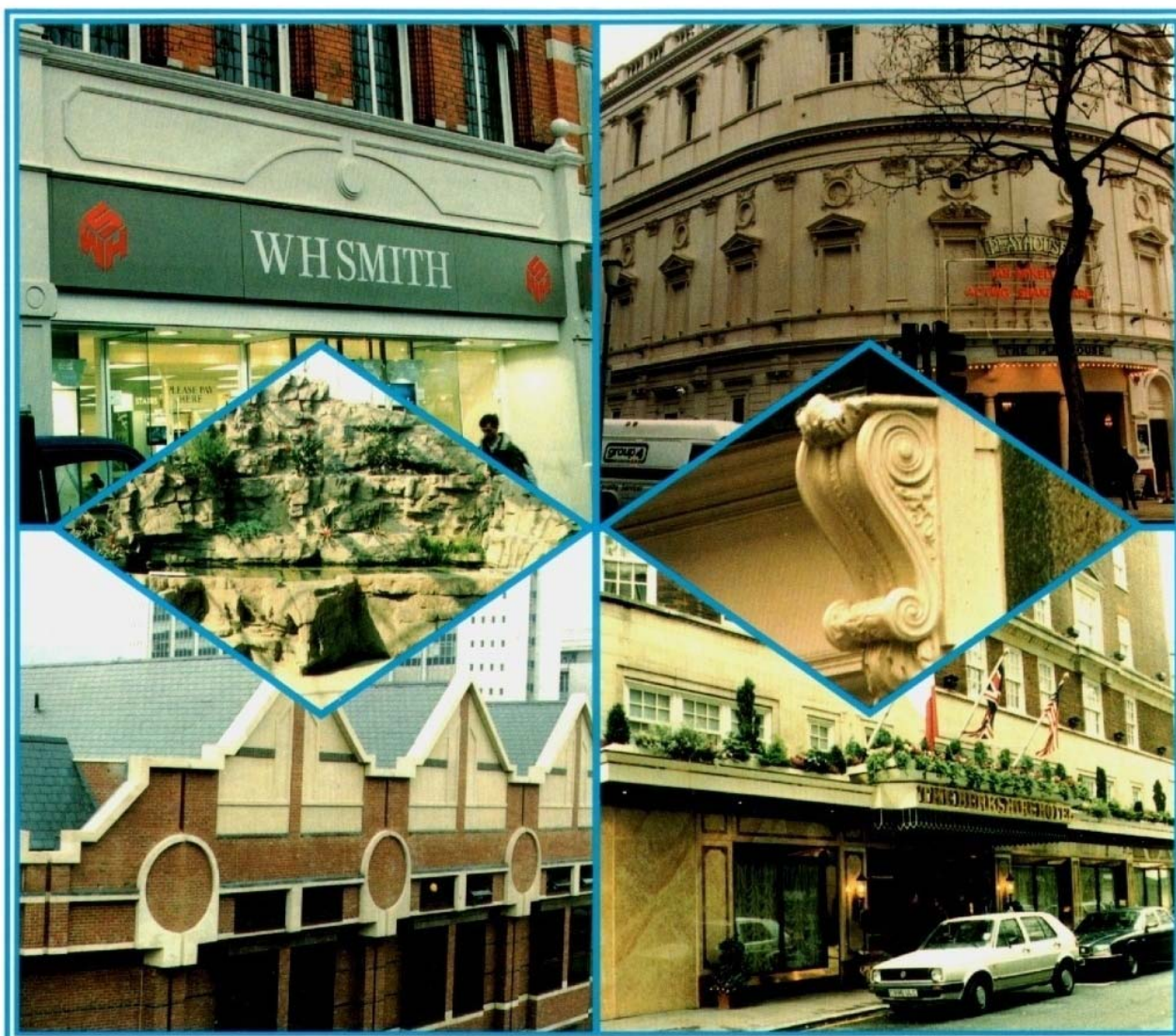
DOWNLAND

GRC PRODUCTION EQUIPMENT

BY K&C MOULDINGS



Members of the Glassfibre Reinforced Cement Association



The most advanced GRC Spray Equipment available

K&C MOULDINGS (ENGLAND) LTD, SPA HOUSE, DISS, NORFOLK IP22 2DF

Telephone: +44 (0)1379 642660 Fax: +44 (0)1379 650304

www.kcmouldings.co.uk email:- sales@kcmouldings.co.uk

Photographs showing GRC at work by courtesy of BCM Contracts Ltd.

DOWNLAND G.R.C. EQUIPMENT

MANUFACTURED BY K. & C. MOULDINGS (ENGLAND) LTD.

K & C Mouldings (England) Limited manufacture a range of machinery for GRC production that offers quality and value while suiting the high production requirements of a demanding industry.

Our pumping systems are based on either Peristaltic or progressive cavity pumps, usually in conjunction with the industry-leading PII Concentric Spraygun while our mixers are based on the Greaves high Shear principle.

The company supplies many areas of the world direct but the following areas are supplied through distributors as shown.

USA:

Spray-Tech Inc.,
5850 Fletcher Avenue,
Lincoln,
Nebraska 68507
U.S.A.
Fax: 00 1 402 466 1752
Email: Stspraytec@AOL.COM
Contact: Mr Kirk Coons

Cyprus-Greece-Turkey-Egypt:

Rock Tech
19 Constantinou Paleologou
Office 2
P.O.Box 42087
6530 Larnaca
Tel: 00 357 24 642828
Fax: 00 357 24 62946
Email: rocktech@cytanet.com.cy
Contact: Mr Marios Christou

Far East Inc. China-Singapore- Thailand & Korea:

Far Eastern GRC Technologies,
370-G Alexandra Road,
#14-10 Lobby 2,
Singapore 159960
Tel: 00 65 6 472 6772
Fax: 00 65 6 473 9131
Email: ngkokseng@pacific.net.sg
Contact: Mr Ng Kok Seng

Scandinavia:

KrejlerApS.,
P.O.Box 102,
Hasselvej 40,
DK-2740 Skovlunde,
Denmark.
Tel: 00 45 44 849955
Fax: 00 45 44 531302
Email: per@krejler.dk
Contact: Mr Per Henriksen

The above companies in most cases offer a commissioning/training service, or for a specialist GRC consultancy service including commissioning and training we suggest that you contact one of the following:

Mr David J Glove
20 Troubridge Walk
Rugby
Warwickshire CV22 7LP
Tel: +44 (1788) 814578
Fax: +44 (1788) 814578
Email: djglover99@hotmail.com

Mr. Graham Gilbert
Cement Composites Technologies
13 Yewdale
Shevington
Wigan WN6 8DE
Tel: 01257 425423
Email: graham@cemcotec.co.uk

DOWNLAND G.R.C. EQUIPMENT

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DOWNLAND 125 HIGH SHEAR MIXER

REF. No AA0200042

The Downland GRC 125 Mixer is a two speed, high shear mixer which batch mixes cement slurry for GRC production.

A powerful electric motor driving a directly coupled shaft, and carefully configured mixer blade ensures rapid production of high quality cement slurry. The 125 kilo (60 litre) capacity of this mixer enables the user to produce slurry using 1:1 mixes based on 4 x 25Kg packs of pre-bagged sand and cement, and the pneumatic lift quickly raises the motor/mixer assembly to facilitate removal of the mixed slurry.

The two speed motor enables the initial mixing to be completed at low speed while the high speed is used to produce a fine smooth slurry. The actual mixing takes 1- 2 minutes and a complete cycle of loading, mixing and removing the mixing tub can be completed in approx. 5 minutes.

To ensure electrical safety the control circuitry is low voltage and for mechanical safety two trip switches are fitted to eliminate the possibility of the mixer operating while unguarded.

The GRC 125 Mixer is normally supplied as a fixed position unit as shown but can also be supplied on a mobile base.



SPECIFICATION

| | |
|--|--|
| Capacity: | 60 litres (nominal) 125 kilos (sand/cement/liquid) |
| Overall Dimensions: | 112 x 66 x 172 cms (Mobile Model Height, 200 cms) |
| Max. Operating Height: | 250 cms (Mobile Model 265 cms) |
| Weight: | 290 Kgs. (Mobile Model 240 Kgs.) |
| Mixer Speed: | 720/1440 rpm (speed and power may vary with electrical supply and requirements) |
| Electrical Motor: | 1.5/6.7 kw (speed and power may vary with electrical supply and requirements) |
| Electrical Supply: | 380/415 volt 3 phase 50 hz (mixers to suit other electrical supplies to special order) |
| Mixer Blade Diameter: | 240 mm |
| Air Requirement: | 3 litres per lift @ 6 BAR (90 psi) |
| Supplied complete with spare tub and spare mixing blade | |

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DOWNLAND G.R.C. EQUIPMENT

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H.C.2A SPRAY PUMP UNIT REF AA020046



The HC2A Spray Pump is a high quality, robust system for pumping a consistent and accurately controlled quantity of cement slurry under the most arduous conditions for the production of GRC by simultaneous spray.

It has a large, 250Kg capacity vibrated hopper with a reduced height sieve feeding a progressive cavity pump driven by a hydrostatic gearbox with manual speed control.

Normal output for hand-spray applications using MKIIA Twinhead or PIIA Concentric Guns is 10-20Kg/minute although absolute maximum is 25Kg/minute.

The control box contains all necessary electrical controls while the pneumatic controls are mounted on the pillar beneath. During spraying the pump is controlled by a sensitive flow switch that is unaffected by pressure changes, while for setting up and cleaning purposes the pump is controlled from the panel.

The HC2A has an air assisted water flush valve which improves the spray cap cleaning action whilst minimising supply hoses.

The HC2A is supplied complete with an articulated 3.5M boom which carries rovings and hoses and reduces the manual effort required from the operator.

SPECIFICATION

| | |
|---------------------------------|--|
| MOTOR RATING | 380-415 VOLTS 3PH 50Hz 1.5Kw (OR AS REQUIRED) |
| AIR CONSUMPTION | 30 L/S @ 7BAR MAX. |
| HOPPER CAPACITY | 250Kg |
| MAXIMUM PUMP SPEED | 202 R.P.M. |
| PUMP MODEL FITTED | 421 |
| SLURRY OUTPUT | 10-25Kg |
| WEIGHT | 280Kg |
| OVERALL HEIGHT | 141 cm |
| HOPPER HEIGHT | 100 cm |
| WIDTH | 94 cm |
| LENGTH | 147 cm |

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H.C.3A SPRAY PUMP UNIT REF AA020045

Photo H.C.3 fitted with M/C Boom
and P111 Concentric Gun



The HC3A Spray Pump is a high quality, robust system for pumping a consistent and accurately controlled quantity of cement slurry under the most arduous conditions for the production of GRC by simultaneous spray.

It has a large, 250Kg capacity vibrated hopper with a reduced height sieve feeding a progressive cavity pump driven by a hydrostatic gearbox with manual speed control.

The HC3A has a high output pump intended to be used in high volume semi-automated production processes. It is ideal for use with crosshead spray systems but also has applications in Handspray where it should be teamed with the P3A concentric for best results.

The HC3A can also be paired with the P11A concentric when the 10-20Kg output will result in a very low pump speed and a consequent increase in pump rotor/stator life.

The control box contains all necessary electrical controls while the pneumatic controls are mounted on the pillar beneath. During spraying the pump is controlled by a sensitive flow switch that is unaffected by pressure changes, while for setting up and cleaning purposes the pump is controlled from the panel.

The HC3A has an air assisted water flush valve which improves the spray cap cleaning action whilst minimising supply hoses.

The HC3A is supplied complete with an articulated 3.5M boom which carries rovings and hoses and reduces the manual effort required from the operator.

SPECIFICATION

| | |
|---------------------------------|--|
| MOTOR RATING | 380-415 VOLTS 3PH 50Hz 1.5Kw (OR AS REQUIRED) |
| AIR CONSUMPTION | 30 L/S @ 7BAR MAX. |
| HOPPER CAPACITY | 250Kg |
| MAXIMUM PUMP SPEED | 132 R.P.M. |
| PUMP MODEL FITTED | 421-621 |
| SLURRY OUTPUT | 10-50Kg |
| WEIGHT | 280Kg |
| OVERALL HEIGHT | 141 cm |
| HOPPER HEIGHT | 100 cm |
| WIDTH | 94 cm |
| LENGTH | 147 cm |

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T.C.2.2 SPRAY PUMP UNIT
REF. AA020000



The TC2/2.2 Pump/spray Unit is a medium output system for pumping an accurately controlled quantity of cement slurry for the production of glass reinforced cement (GRC) by the simultaneous spray application of slurry and glass.

It has a hopper-fed progressive cavity pump, driven by a variable speed thyristor motor producing slurry outputs of up to 20kgs per minute. The hopper has a vibrated sieve, which ensures that high quality slurry is supplied to the spraygun eliminating blockages and stoppages and the pump is fitted with a quick-strip stator to facilitate cleaning.

The control box includes all electrical and pneumatic switches and valves necessary for the precise control of the slurry pump. During spraying the pump is controlled by a sensitive flow switch that is fast acting and unaffected by pressure changes, while for setting up and cleaning purposes the pump is controlled from the panel.

The TC2-2.2 Pump Unit is suitable for use with either the PII Concentric or MKII Twinhead Sprayguns.

The TC2-2.2 is built on a strong base with heavy duty castors for easy movement and is sufficiently stable to carry a 3 metre hoses and roving boom.

SPECIFICATION

| | |
|-------------------------------|---|
| ELECTRICAL SUPPLY..... | 220/240 VOLTS 1Ph. 50/60 Hz (OTHER VOLTAGES AVAILABLE) |
| ELECTRIC MOTOR..... | D.C. 2.2KW MOTOR TOTALLY ENCLOSED FAN |
| COOLED | |
| AIR CONSUMPTION..... | 30 L/S @ 7 BAR |
| WEIGHT..... | 380 KG |
| DIMENSIONS | 160 X 110 X 145 CMS (HOPPER HEIGHT) 95 CMS |

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P11 CONCENTRIC SPRAY GUN AND CHOPPER
REF. AA020005

The Downland P11 Concentric Spray/chopper is widely regarded as the GRC industry 'standard' as it is well-balanced, easy to use and produces high-quality GRC on both open and intricate shapes. The chopper is driven by a powerful, 6000RPM pneumatic motor and has a direct drive, variable bladed cutting cylinder operating in conjunction with an adjustable, cam mounted polyurethane roller. The chopped glass is ejected by an integral airmover into the centre of the slurry spray cone producing the perfect spray pattern for which the P11 is justly famed throughout the GRC industry.

As the P11 Concentric has a 2mm annular ring slurry nozzle it requires an appropriately sieved slurry but it is fitted with a water flush which facilitates cleaning and maintenance.

The P11 is supplied as standard with a 6000 R.P.M. airmotor, 6 slot cutting cylinder and 3 hole rovings tube but the following variations are available:

2600 RPM airmotor - output 0.2-0.5Kg/min.

6 slot cylinder 18mm & 36mm strands

8 slot cylinder 14mm strands

9 slot cylinder 12mm strands



SPECIFICATION

SLURRY OUTPUT..... 10-15Kg/min.

FIBRE OUTPUT..... UP TO 1Kg/min.

AIR CONSUMPTION..... 2.5 L/S @ 7 BAR

WEIGHT..... 2.7 Kg.

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DOWNLAND G.R.C. EQUIPMENT
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P11A CONCENTRIC SPRAY GUN AND CHOPPER

REF. AA020065

The Downland P11A Concentric Spray/chopper is widely regarded as the GRC industry 'standard' as it is well-balanced, easy to use and produces high-quality GRC on both open and intricate shapes. The chopper is driven by a powerful, 6000RPM pneumatic motor and has a direct drive, variable bladed cutting cylinder operating in conjunction with an adjustable, cam mounted polyurethane roller. The chopped glass is ejected by an integral airmover into the centre of the slurry spray cone producing the perfect spray pattern for which the P11A is justly famed throughout the GRC industry.

As the P11A Concentric has a 2mm annular ring slurry nozzle it requires an appropriately sieved slurry but it is fitted with a water flush which facilitates cleaning and maintenance.

The P11A is supplied as standard with a 6000 R.P.M. airmotor, 6 slot cutting cylinder and 3 hole rovings tube but the following variations are available:

2600 RPM airmotor - output 0.2-0.5Kg/min.

6 slot cylinder 18mm & 36mm strands

8 slot cylinder 14mm strands

9 slot cylinder 12mm strands



SPECIFICATION

SLURRY OUTPUT..... 10-15Kg/min.

FIBRE OUTPUT..... UP TO 1Kg/min.

AIR CONSUMPTION..... 2.5 L/S @ 7 BAR

WEIGHT..... 2.7 Kg.

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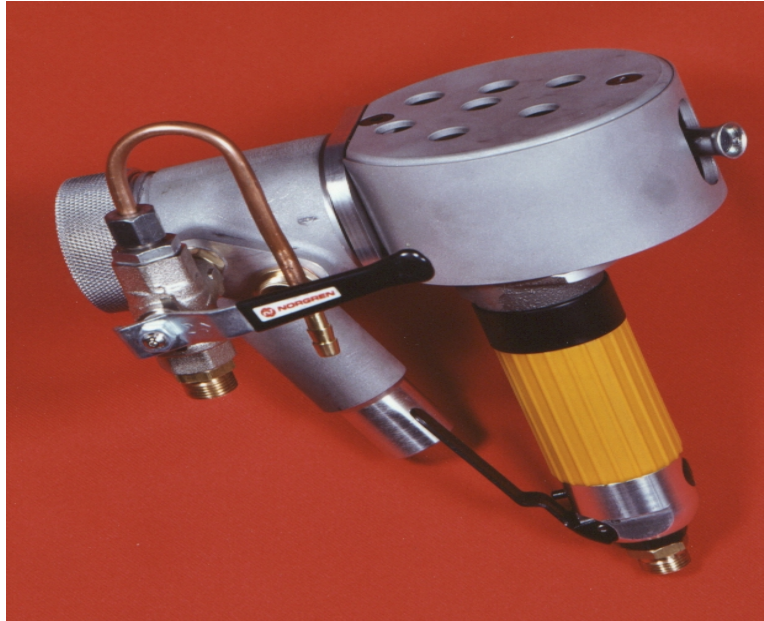
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P3 CONCENTRIC SPRAY GUN AND CHOPPER

REF: AA020052



The Downland P3 Concentric Spraygun/chopper is a high-output version of the PII and has been designed with an improved airflow and control valve enabling an output of up to 30Kgs slurry to be achieved.

The chopper is driven by a powerful, 6000 RPM pneumatic motor and has a direct drive, variable bladed cutting cylinder with an adjustable, cam mounted polyurethane roller. The chopped glass is ejected by an integral airmover into the centre of the slurry spray cone producing a perfect spray cone at high outputs.

As the PII Concentric has a 2mm annular ring slurry nozzle it requires an appropriately sieved slurry but it is fitted with a water flush which facilitates cleaning and maintenance.

The P3 is supplied as standard with a 6000 RPM airmotor, 6 slot cutting cylinder and single hole rovings tube but the following variations are available:

6 slot cylinder 18mm & 36mm strands
8 slot cylinder 14mm strands
9 slot cylinder 12mm strands
12 slot cylinder 9mm strands

SPECIFICATION

SLURRY OUTPUT.....UP TO 30KG/MIN
GLASS OUTPUT.....UP TO 1.5 Kg/MIN
AIR CONSUMPTION.....30 L/S (AT 7 BAR)
WEIGHT.....2.8 Kg.

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DOWNLAND G.R.C. EQUIPMENT
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MK11 SPRAY GUN AND CHOPPER (TWINHEAD)

REF. AA020002



The Downland MKII Spraygun/chopper is the original industry 'workhorse' and has been in continuous production for over 20 years. It is a robust spraygun of simple, construction, capable of spraying coarse slurry and best suited to open and flat moulds.

The chopper is driven by a powerful, 6000 RPM pneumatic motor and has a direct drive variable bladed cutting cylinder operating in conjunction with an adjustable, cam mounted polyurethane roller. Chopped glass is expelled from the cutting chamber by a lightweight airmover which impinges on the slurry stream.

The MKII Twinhead has the chopper mounted above the spraygun but it can also be swung through 90° to produce a side-by-side arrangement which some operators find preferable.

The MKII is supplied as standard with a 6000 RPM motor, 9mm spray nozzle, 6 slot cutting cylinder and 3 hole roving tube, but the following variations are available:

6000 RPM airmotor - Output 0.5-2Kg/min
2600 RPM airmotor - Output 0.2-0.5Kg/min.

6 slot cylinder ...18mm & 36mm strands
8 slot cylinder ...14mm strands
9 slot cylinder ...12mm strands

6 mm Material Tip and Air Cap - Output 2-5Kg/min
9 mm Material Tip and Air Cap - Output 5-15Kg/min
12 mm Material Tip and Air Cap - Output 15-20Kg/m

1 hole Rovings Feed Tube for chopping 2 or 3 rovings simultaneously

SPECIFICATION

SLURRY OUTPUT UP TO 20Kg/min
FIBRE OUTPUT 0.2-2Kg/min (dependent on airmotor & feed tube)
AIR CONSUMPTION 25 L/S @ 7 BAR
WEIGHT 2.6Kg.

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AUTOMATIC CONCENTRIC SPRAY GUN

REF. No AA020051

The Automatic Concentric Spraygun is a high output unit designed for use on crosshead reciprocating machines. It is based on the well-proven principle of a pneumatic chopper ejecting chopped strands into the centre of a cone of cement slurry. The Automatic gun is approximately half the weight of the earlier triple head auto guns, is mounted on a single pole and offers a considerable saving in air consumption while being much easier to operate and maintain.

The Automatic Concentric gun requires a sieved slurry but is fitted with a waterflush system that facilitates cleaning and maintenance.

The Automatic Concentric Spraygun is supplied as standard with a 6000 RPM airmotor, 6 slot cutting cylinder and single hole rovings feed tube but the following variations are available:

6 slot cylinder ... 18mm & 36mm strands
8 slot cylinder ... 14mm strands
9 slot cylinder ... 12mm strands
12 slot cylinder ... 9mm strands



FEATURES INCLUDE

- **LIGHTWEIGHT ALLOY CONSTRUCTION**
 - **QUICKSTRIP ASSEMBLY**
 - **HIGH TORQUE MOTOR**
- **SINGLE INPUT ROVINGS TUBE**
- **MOUNTING BRACKET INCLUDED**

SPECIFICATION

SLURRY OUTPUT..... UP TO 30KG/MIN
GLASS OUTPUT.....UP TO 1.5 Kg/MIN
AIR CONSUMPTION..... 25 L/S (AT 7 BAR)
WEIGHT..... 5.5 Kg

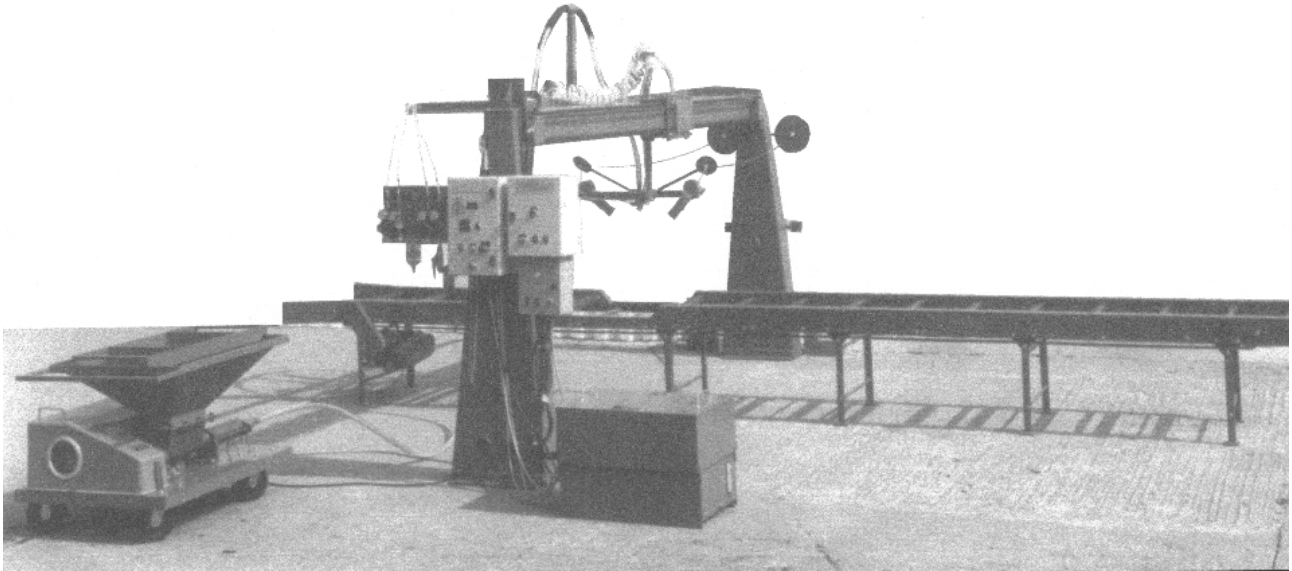
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DOWNLAND CROSSHEAD SPRAY SYSTEMS



*Either the Triple Head Spraygun (as shown in the photo) or the Automatic Concentric Spraygun
may be fitted*

The Crosshead Spray System is a custom-built unit for the semi-continuous production of flat and shallow profile GRC sheets and panels. The crosshead (or autospray) process is based on the principle of a spraygun/chopper continuously reciprocating above a mould carried beneath it on a speed controlled conveyor.

The speed of the reciprocation is normally fixed at approx. 60M/min. while the conveyor speed can be varied to enable differing width and thicknesses of panel to be produced. Due to the controlled speeds of crosshead and conveyor consistent panels can be produced at high production rates within tolerances of plus/minus 0.5mm on 10mm thicknesses. Based on a nominal spraygun output of 30Kgs slurry per/min panel outputs of up to 80M² thickness per hour can be achieved although it must be emphasised that the production rates are constrained by factors such as slurry mixing, mould availability and storage space.

Please contact us for a further quotation or further information.

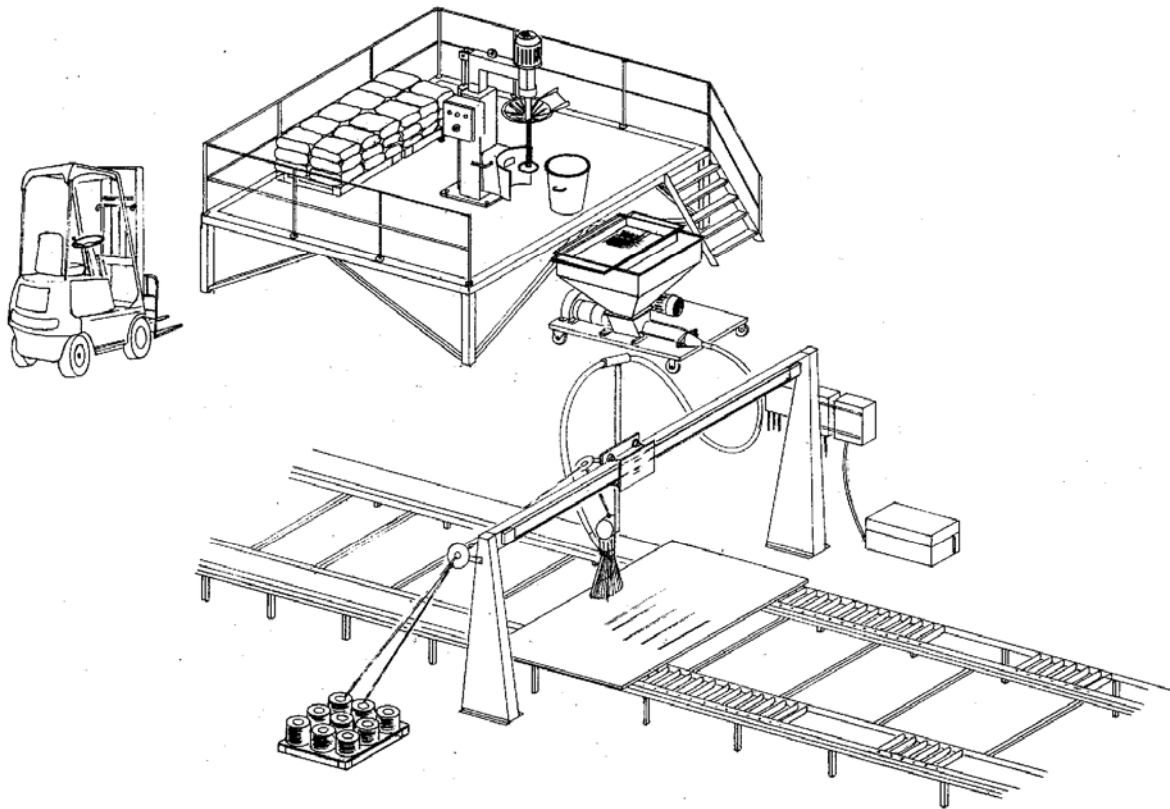
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DOWNLAND CROSSHEAD SPRAY SYSTEMS



The sketch above indicates a suggested method for the production of flat panels. Mould storage and de-mould areas are not shown as the quantity and size of mould play a major role in the planning of these particular areas and are best designed to suit local conditions.

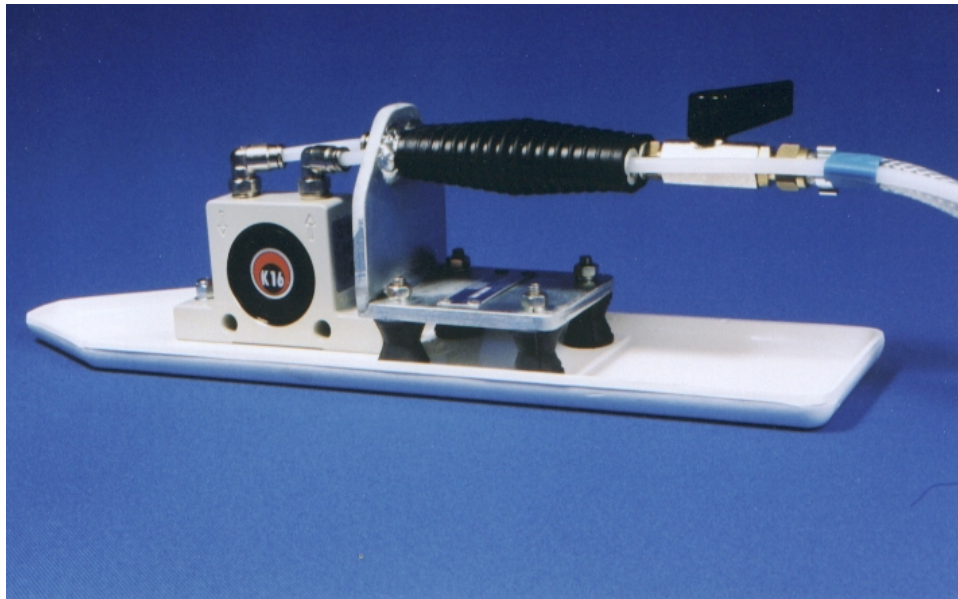
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VIBRATING TROWEL REF. AA017909



A trowel designed specifically for the GRC industry for compacting sprayed up mouldings.

The vibrating trowel consists of a tough glass fibre base and an air operated vibrator with the handle mounted on rubber bushes to eliminate operator fatigue. The vibrating trowel can effectively compact 6 – 8mm thicknesses in the time taken to compact 3 – 4 mm by roller.

SPECIFICATION

SIZE:16" (406mm) x 4" (102mm)

WEIGHT:1.75 Kg.

AIR CONSUMPTION:10 c.f.m. @ 80 p.s.i.

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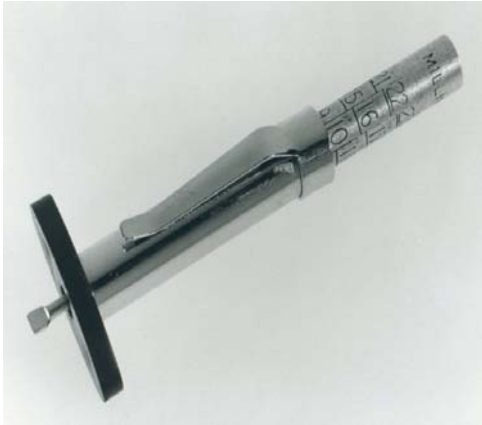
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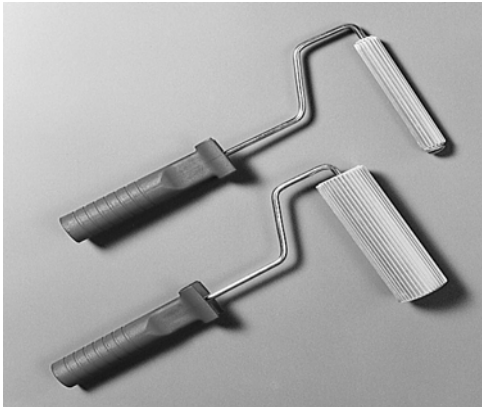
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DOWNLAND G.R.C. ANCILLARY PRODUCTS



DEPTH GAUGE

The depth gauge is used to check the thickness of GRC composites during the spraying process. It is calibrated from 1 - 26mm.



PADDLE ROLLERS

For the compaction of sprayed G.R.C. these lightweight alloy fluted rollers are available in two diameters and four lengths.

| | | | | | | | | | | |
|------|----------|------|--------|---|--------|------|---------------|---|---|---|
| Ref: | AA017428 | ---- | 2" | x | 1 3/4" | Dia. | Paddle Roller | | | |
| | AA017429 | ---- | 3 1/2" | x | 1 3/4" | | | " | " | " |
| | AA017430 | ---- | 5" | x | 1 3/4" | | | " | " | " |
| | AA017431 | ---- | 6" | x | 1 3/4" | | | " | " | " |
| | AA017420 | ---- | 2" | x | 7/8" | | | " | " | " |
| | AA017421 | ---- | 3 1/2" | x | 7/8" | | | " | " | " |
| | AA017422 | ---- | 5" | x | 7/8" | | | " | " | " |
| | AA017423 | ---- | 6" | x | 7/8" | | | " | " | " |



SPRING ROLLERS

Made from a stainless steel spring this type of roller is the most commonly used for consolidating GRC because of its ability to conform to irregular shapes and curves and it is easily kept clean by just giving the spring a light tap.

Large Spring Roller Ref: AA017485
(41mm dia. x 127mm long)

Small Spring Roller Ref: AA017484
(25mm dia. x 87mm long)

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DOWNLAND G.R.C. ANCILLARY PRODUCTS



MISTCOAT SPRAY GUN

The mist coat gun is used to apply an initial coat of cement slurry to a moulding prior to the application of the cement slurry and fibre backup.

The use of mistcoat improves detail reproduction on textured surfaces and minimises the risk of air inclusion. It is supplied with 4mm, 6mm and 8mm nozzles and can also be used to spray masonry paints and textured coatings.

5.5 litre Hopper Capacity

Air Consumption Up to 12 L/S @ 6 BAR



SLUMP TESTER

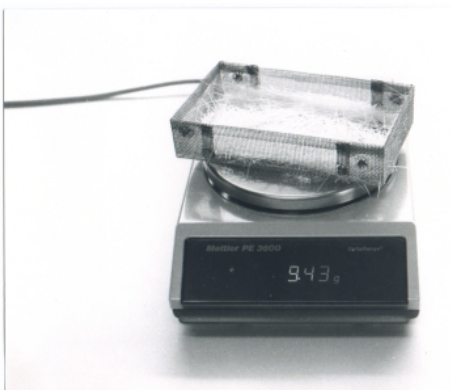
For the determination of the slump value of cement slurry.

The dry tube is placed on the target plate coincident with the innermost ring and is then completely filled with the slurry under test. Care must be taken to expel any air bubbles, if necessary, by gently rodding the mix.

The tube is then lifted vertically off the plate thereby allowing the slurry to flow over the target area of concentric circles.

The slump value is given by the extent of flow of the slurry and is expressed on the scale 0-8.

Three tests are carried out and the results should agree within ½ a ring.



TEST BASKET

For the determination of the glass, content of an uncured GRC composite

175mm long x 100mm wide x 25mm deep (7" x 4" x 1") made from 0.8mm (0.032" stainless steel mesh. Numbered 1 to 10.

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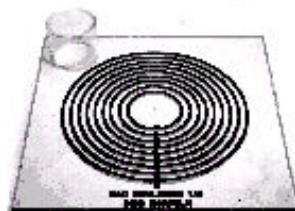
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DOWNLAND G.R.C. EQUIPMENT
MANUFACTURED BY K. & C. MOULDINGS (ENGLAND) LTD.

GRC TEST KIT
Bag/Bucket Washout
AA020057

The GRC Test Kit enables manufacturers to carry out the necessary QC checks to EN 1170 Parts 1, 2 and 3 (for sprayed GRC) to determine the quality of their GRC production.

- 1 x 4Kg x 0.1gramme electronic weight scale with 225 x 275mm platform (Use to check weigh slurry for the bucket test, glassfibre for the bag test and the glass content of wet coupon tests).
- 1 x Slump Tester (Use to determine the slump value of cement slurry for EN 1170-1)
- 1 x Set 6 Washout Test Baskets (Use to contain wet coupons before and after washout for EN 1170-2).
- 6 x 10L Polyethylene Buckets (Use to contain and weigh cement slurry for the 'bucket' test for EN 1170-3).
- 1 Pack 1000 x 300 x 450mm x 120 gauge Polythene Bags (Use to contain and weigh glassfibre for the 'bag' test for EN 1170-3).
- 2 x Thickness Gauges (Use to determine the wet thickness of sprayed GRC).



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DOWNLAND G.R.C. EQUIPMENT
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GLASSFIBRE CHOPPER AND TIMER



The chopper and timer are for use with GRC Premix mixers where the steady supply of chopped glass helps to eliminate the 'mess and balling' that hand feeding can produce.

The chopper is powered by a powerful pneumatic motor which is designed for long-term safe operation in the wet and dusty environment of a cement slurry mixer.

The output rate and shot length are pre-determined dependent upon the overall mix quantity and glass percentage required. The chopper is fitted as standard with a 6 slot cutting cylinder which produces either 18 or 36mm strands. Cylinders are available as shown to produce alternative strand lengths.

The glass chopper consistently produces a pre-determined quantity of chopped glass directly into the mixer at up to 1Kg/minute/roving. The even flow of glass improves the mix quality and reduces costs due to the less expensive continuous roving. There is a further reduction in costs for export customers as shipping costs for rovings are reduced.

SPECIFICATION

| | |
|-----------------------------|---|
| DIMENSIONS..... | 250mm (length) x 125mm (width) x 160mm (Height) |
| WEIGHT..... | 3.0Kg |
| AIR SUPPLY..... | 10L/sec. at 6 bar (21CFM @ 90PSI) |
| OUTPUT..... | 1 roving – 1Kg/minute 2 roving – 2Kg/minute |
| STRAND LENGTH..... | 6 slot cylinder ... 18mm & 36mm strands 8 slot cylinder ... 14mm strands 9 slot cylinder ... 12mm strands 12 slot cylinder ... 9mm strands |
| TIMER CAPACITY..... | 20-300 secs. (2-30 secs. also available) |
| CONTROL BOX DIMENSIONS..... | 400mm (H) x 30mm (W) x 150mm (Deep) |

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DOWNLAND G.R.C. EQUIPMENT

SUPPLIED BY K. & C. MOULDINGS (ENGLAND) LTD.

DIEM GRC PREMIX MIXER DZ 180V



The DIEM GRC MIXER is a high quality powerful mixer capable of mixing 300Kg batches of slurry or premix in 5-6 minutes. Raw materials can be loaded by bag or screw feed and the mixed batch is emptied through a bottom discharge door.

The mixing action is by two floor scrapers, side scraper and satellite star blade revolving at 55RPM. The mixer is mounted on cross members which are convenient for forklift handling and suitable for floor mounting or building onto a mezzanine or purpose built platform to give a raised discharge point. Chopped fibres can be added manually or a glass chopper can be fitted to dispense from continuous rovings.

SPECIFICATION

DIMENSIONS..... 1.2 x 1.3M.
HEIGHT..... 1.4M.
DISCHARGE HEIGHT..... 0.7M
WEIGHT..... 350Kg
POWER..... 7.5Kw 3ph., 415v., 50Hz electric motor
MIXER SPEED..... 55RPM
MIXER CAPACITY..... 180L/300Kg Cement Slurry

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DOWNLAND G.R.C. EQUIPMENT

MANUFACTURED BY K. & C. MOULDINGS (ENGLAND) LTD.

PREMIX MIXERS GRC20 and GRC50

The GRC20 and 50 mixers give GRC manufacturers the opportunity to produce Premix GRC on a small to medium scale with a low capital investment. They are suitable for small, start-up GRC premix manufacturers using polymer and/or superplasticizer mixes. They are not suitable for long term use on very stiff mixes. Technical service back up is available and advice can be given on mix designs. Please contact us for details.

GRC20

The GRC20 is a hand-held contra-rotating mixer with a thorough and consistent mix action. The twin paddles reduce counter rotational torque which helps to minimise operator fatigue when mixing stiff materials.



GRC20

| | |
|--|-----------------|
| Power | 1150watt |
| Speed | 450RPM |
| Paddles | 2 x EZR140 |
| Capacity | 20Kg GRC Premix |
| Tub Capacity | --- |
| Output | 300Kg/hour |
| Noise Level | 77dBA |
| Vibration Level | 4.3 m/s |
| Electrical Supply | 1ph., 240v. |
| Weight | 6.8Kg |
| The GRC20 can be supplied with a 110v motor in which case a 3KVA Transformer is required | |

GRC50

The GRC50 is a forced action rotating tub mixer that will quickly and easily mix up to 40Kg of cement slurry and then incorporate 2-3% AR glassfibres without damage to the strand integrity.

The adjustable stainless steel paddles generate both a radial and axial action which ensures thorough mixing throughout the tub.



GRC50

| |
|---|
| 1.5Kw |
| 55RPM |
| 1 x L and 1 x X shapes |
| 40Kg GRC Premix |
| 65L |
| 600Kg/hour |
| 67dBA |
| --- |
| 1ph., 240v. |
| 78Kg |
| The GRC50 can be supplied with a 110v motor in which case a 5KVA Transformer is required. |

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DOWNLAND G.R.C. EQUIPMENT

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DOWNLAND SPX40 PREMIX SPRAY PUMP



The Downland SPX40 Premix Pump represents a new generation of pump/spray systems. It is based on a Peristaltic Pump which has a patented direct-coupled design and uses a natural rubber pump hose with an anticipated life of at least 2000 hours due to running in a lubricant bath.

The pump inlet is connected to the hopper by large-bore pipe work offering an unrestricted flow for premix slurries. It is protected by a hinged steel cover and can be further protected by a clear polythene curtain if necessary. The pump, hopper and all controls are mounted on a sturdy mobile frame and all components are easily accessible for maintenance.

The pump drive is reversible to help clear obstructions and the pump and outlet hose are easily cleaned by flushing through water and a sponge rubber ball. The gun can be cleaned with a water/air mixture delivered through the hose from the integral flushing valve.

The SPX40 is primarily a spray system but can be supplied less spraygun with remote switching for mould filling

SPECIFICATION

| | | | |
|-----------------------|---------------------|-----------------------------|-------------------------------|
| Overall Length | 1525mm | Pump Output | 4-21L/M (8-45Kg/min. slurry) |
| Overall Width | 1020mm | Pump Motor | 0.75Kw. IP55 |
| Overall Height | 1403mm | Electrical Supply | 3ph., 380-415v., 50Hz |
| Hopper Capacity | 100L (220Kg slurry) | Compressed Air Supply | Up to 20L/sec @ 6 bar |
| Hopper Height | 890mm | Water Supply | 5L/min. |
| Pump Type | Peristaltic | Water Flush | Combined water/sprayair valve |
| Pump Speed | 3-16RPM | Discharge Pressure | Up to 5Bar |

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DOWNLAND G.R.C. EQUIPMENT
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DOWNLAND SPX40D DUAL PUMP SYSTEM



The Downland SPX40D Dual Pump represents a new generation of pump/spray systems. It is based on a Peristaltic Pump which has a patented direct-coupled design and uses a natural rubber pump hose with an anticipated life of at least 2000 hours due to running in a lubricant bath.

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DOWNLAND SPX40 DUAL PUMP SYSTEM

The SPX40D Dual Pump System gives the versatility of a high quality premix pump combined with a system that can produce simultaneous spray/chop for high strength products.

The SPX40D Dual Pump System is supplied with a 3.5M articulated hose and rovings boom, ST premix spraygun and PII concentric spraygun chopper. It has a 200Kg hopper with sieve and a powerful pneumatic vibrator capable of moving the latest 'sticky' mixes.

The pump inlet is connected to the hopper by large-bore pipe work offering an unrestricted flow for premix slurries. It is protected by a hinged steel cover and can be further protected by a clear polythene curtain if necessary. The pump, hopper and all controls are mounted on a sturdy mobile frame and all components are easily accessible for maintenance.

The pump drive is reversible to help clear obstructions and the pump and outlet hose are easily cleaned by flushing through water and a sponge rubber ball. The gun can be cleaned with a water/air mixture delivered through the sprayair hose from the integral flushing valve.

SPECIFICATION

| | |
|------------------------------|-------------------------------------|
| Overall Length | 1525mm |
| Overall Width | 1020mm |
| Overall Height | 2725mm |
| Hopper Capacity | 100L (220Kg Cement slurry) |
| Hopper Height | 890mm |
| Pump Type | Peristaltic |
| Pump Speed | 3-16RPM |
| Pump Output | 4-21L/M (8-45Kg/min. cement slurry) |
| Effective Spray Output | 20Kg/min. |
| Pump Motor | 0.75Kw. IP55 |
| Vibrator | Piston Type |
| Electrical Supply | 3ph., 380-415v., 50Hz |
| Compressed Air Supply | Up to 20L/sec @ 6 bar |
| Water Supply | 5L/min. |
| Water Flush | Combined water/sprayair valve |
| Discharge Pressure | Up to 5Bar |

| |
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DOWNLAND G.R.C. EQUIPMENT
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DOWNLAND PRE-MIX 100 MIXER

REF. No AA020049

The Downland Pre-mix 100 mixer is a high powered, single speed batch mixer which has two carefully configured paddles that will both mix cement slurry and incorporate chopped glassfibres into the slurry mix.

A powerful electric motor driving a directly coupled shaft with two 4-bladed paddles ensures rapid production of high quality cement slurry using mixes based on 50Kg cement and 35 -40Kg sand. The glass can either be added to the mix by hand and vibration or chopped in by a timed shot from a pneumatic chopper.

The Pre-mix 100 produces a 100Kg batch of slurry/glass suitable for either vibration casting or Pre-mix spray in 6 - 8 minutes, and is fitted with a pneumatic lift which raises the motor/mixer assembly to facilitate removal of the mixed slurry.

The Pre-mix 100 is normally supplied for floor mounting but can also be supplied with a mobile base as shown.



FEATURES INCLUDE

- 100kg capacity
- Powerful 2.2 Kw geared motor drive
 - Double Safety Interlock
 - Spare mixing tub included

OPTIONAL EXTRAS

- Mobile base
- Vibrator to assist materials feeding
- Pneumatic chopper and timer

SPECIFICATION

| | |
|--------------------------------------|---|
| Mixing capacity | 100 Kg |
| Electrical supply | 400V 3ph 50Hz. (other voltages available) |
| Air supply | 7 bar (100 P.S.I.) 3 litres per lift |
| Mixer speed | 390 R.P.M.. |
| Weight (including mobile base) | 360 Kgs |
| Overall dimensions | 210 x 120 x 180 cms |
| Weight (floor mounted model) | 310kgs... |
| Overall dimensions | 200 x 85 x 170 cms |

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VIBRATING TABLE

Ref. AA020053



The Armcon vibrating table is a sturdy, steel table with adjustable frequency vibration that is used to ensure good quality castings. It reduces air-entrapment and increases density.

The Vibrating table consists of a steel 2M x 1M top mounted on isolator blocks which give a height of 600mm. It is fitted with an electric, variable speed motor which enables it to handle a large variety of different sizes and shapes of mould with different types of mix. The vibrating table has a 1300Kg force 3 phase vibrating motor which for increased safety is run from a single phase supply. The motor has automatic dc braking which allows the direction of the motor rotation to be changed.

SPECIFICATIONS

| | |
|--------------------------|--------------------------|
| Size: | 2000mm x 1000mm |
| Height: | 600mm |
| Weight: | 255Kg |
| Vibration Frequency: | variable 0-6000RPM |
| Vibration Force: | 1300Kgf |
| Variable Speed Invertor: | single phase/three phase |

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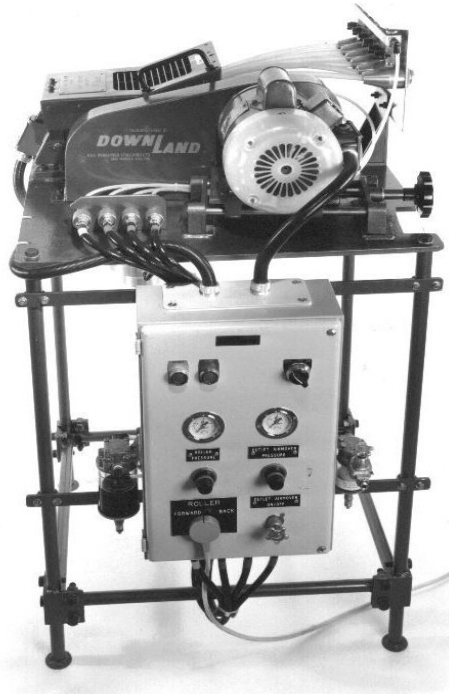
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G.R.C. HEAVY DUTY FIBRE CHOPPER SERIES 1

REF. AA020018



The Downland Heavy Duty Fibre Chopper is built for continuous or intermittent chopping of up to 6 glassfibre rovings for pre-mix applications.

Various lengths of chopped strands are possible with the length being determined by the number of blades fitted into the cutting cylinder and the output being variable by an adjustable belt drive which shot sizes are determined by a timer.

SPECIFICATION

| | |
|-------------------------|-------------------------------|
| ELECTRICAL SUPPLY | 415 V 3 Ph .75 Kw 1400 R.P.M. |
| AIR SUPPLY | 15 C.F.M. @ 7 BAR |
| OVERALL WEIGHT | 110 Kgs |
| HEIGHT | 124 Cms |
| WIDTH | 80 Cms |
| LENGTH | 85 Cms |

Input: Up to 6 rovings of 2400 Tex.

Output: Up to 6Kgs per minute. Strand length can be 3,6,9,12,18,27 or 54mm. The variable speed drive enables the output to be infinitely varied from about 300gms to 6Kgs per minute.

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