

MK5E 5 LITRE POT STILL

PATENT APPLICATION
NO. 331170



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Welcome to a new hobby, one that is a lot of fun and saves lots of dollars.

The instructions that follow should be read carefully, if anything is unclear write or phone for more details.

Your Spirits Unlimited Still is manufactured in New Zealand to the highest standards from food grade stainless steel and can be expected to perform very well over a lifetime. Always rinse the unit after use with warm water.

DO NOT USE SCOURING PADS OR CAUSTIC CLEANERS

A well made home spirit should be equal or better to any commercial type and you have the chance to make it exactly to your taste.

Cheers
Spirits Unlimited

Sterilisation

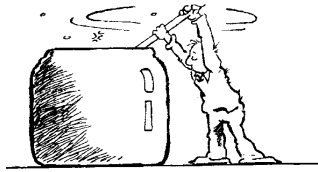
Sterilisation is one of the keys to producing high quality spirits.

Before starting a brew (fermentation or wash) it is important to thoroughly wash and then sterilise **ALL** fermenting equipment. **This does not include the still.**

A solution of sodium metabisulphite (2 tablespoons per 5 litres of water) or preferably sodium hypochlorate (janola bleach—250 mls per 5 litres of water) is made up and all fermenting items soaked overnight, then rinsed and reassembled the following day.

NOTE: stills should not be cleaned with sterilising solution, use clean hot water only

Fermenting The Wash



Our process is designed to rapidly ferment out a nutrient/sugar base to produce a maximum level of alcohol and minimise off flavours and oils.

1. Clean and sterilise with standard bleach only a 30 litre brewing barrel fitted with an airlock.
Include any bungs, taps, caps, spoons etc (everything you would use in the fermentation process).
2. To make a:
10 litre wash in a fermenter dissolve 2.25kg of sugar in 5 - 6 litres of water at 25' Celsius. When sugar has dissolved add contents of Spirits Unlimited SUPERBREW. Mix well and top up to 10 litres with water.
20 Litre wash in a fermenter dissolve 5 kg of sugar in 10 - 12 litres of water at 25' Celsius. As above up to 20 litres.
25 Litre wash as above using 6 kg and bring volume up to 25 litres.
Do not use hot water or the yeast will be killed.
- 3 Stir well, seal the barrel and set the airlock (not with Alcotec 24)
- 4 Ferment out at 20'C. This will take up to 2-5 days depending upon which yeast is used. Do not use heating above this temperature.
- 5 Check your SG (specific gravity) every other day until the brew has worked out completely.
Aim for an SG of 990 or under.
- 6 Once fermentation has ceased, allow the brew to sit for 1 - 2 days to clear.
- 7 Decant the wash off the sediment, ensuring that no sediment is carried over into the distilling pot or off flavours will result.

Distillation



You are now ready to put your wash through your Still.

- 1 Fit the cooling tubes to the condenser pipe (this may come already assembled). The cold water inlet is the bottom fitting. Soften the tubes first in warm water to assist with fitting.
- 2 With one hand inside supporting the grommet, fit the condenser to the lid. The condenser tube should not extend into the lid by any more than 3 mm. Flush is best. A little hot water on the grommet will help. Once the condenser is attached the still can remain assembled.
- 3 Place the thermometer in position with the red bulb only extending into the pot lid.
- 4 Place the still on an upturned pot or some non-combustible surface which has sufficient height to allow for a container to collect the spirit.
- 5 Fill your MK5E Still with 4.25 litres of wash. The left over wash will be distilled later. Seal the container again to stop any contamination occurring.
- 6 Turn the power on and then turn cooling water to a low flow. The still will take approximately 60 minutes to come up to operating temperature, you can monitor progress with the thermometer. It will drip very slowly. Before flowing in a steady stream, collect and **DISCARD the first 1/4 cup or 2 tablespoons (30mls). This is the methanol and is harmful and must be discarded.**
- 7 With the temperature rising slowly over about 1 hour 30 minutes you will have collected approximately 700mls of spirit and the temperature will have risen to 93 - 93.5'Celsuis. Turn off the power and water at this point. Clean out the still as soon as it is cool enough to handle, the old wash is very acidic and must be discarded as soon as possible.

Treating The Spirit

Post distillation treatment can make the difference between an average brew and something very special.

To treat your spirit:

- 1 Pour spirit into a clean 1.5 litre cordial bottle
- 2 Add clean water to your distilled spirit to make up to 1150mls
- 3 Add one of the two Spirits Unlimited Carbon Treatment packs, this will temporarily blacken the spirit. Store in a cool place for 2 to 3 day, leave the bottle cap loose to allow the spirit to 'breathe'.
- 4 Using a funnel and 2 coffee papers carefully pour the now cleared spirit off the carbon and into a 1125ml bottle.
- 5 Congratulations you now have a bottle of cleared spirit.

Alternatively, you could use one of Spirits Unlimited Vertaflow Filter systems.

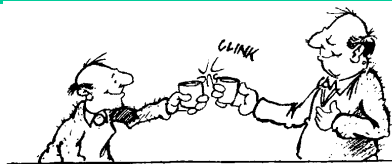
This is a stainless steel unit that treats and filters your spirit at the same time. It filters at approximately 1 drip per second.

Comes with a double pack of carbon, each pack treats 5 litres of spirit.



Testing The Spirit Strength

You will have produced 700mls of spirit at approximately 65%. AS 'spirits' are generally 37.5-40% your brew will need diluting.



It is dangerous to drink over-strength spirit. We recommend 30% for liqueurs.

Using a spirit hydrometer check the actual strength, correct for temperature and dilute with good, clean water. You can dilute your spirit before carbon filtering as this will filter the water as well. A reaction between water and strong spirit is common. The spirit will become hazy with tiny air bubbles and become

ADJUSTING THE SPIRIT STRENGTH

Because liquids become 'thinner' as temperature increases, the reading From your hydrometer must be adjusted to allow for this affect.

Example:

I have 1 litre of spirit at 20°C. The hydrometer reading is 90%. The actual strength therefore is 92%

Temperature Correction

'C	40	45	50	55	60	65	70	75	80	85	90%
16	40	45	50	55	60	65	70	75	80	85	90
18	41	46	51	56	61	65.5	71	76	81	86	91
20	42	47	51.5	56.5	61.5	66	72	76	81	87	92
22	43	47.5	52	57	62	67	73	77	82	87	92
24	44	48	53	58	63	67.5	73	78	83	88	93

Dilution to 40%

Once you have determined the actual strength (temperature corrected) % Alcohol as corrected

40	45	50	55	60	65	70	75	80	85	90	95
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Add this amount of water to each litre

-	125	250	375	500	625	750	875	1000	1125	1250	1500
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Flavouring The Spirit

FLAVOURING

Once you have a batch of clean spirit it becomes the base for a huge range of spirits, liqueurs, cocktails and RTD mixes.

In our range there's something to satisfy every taste and if not you can always enter the fascinating world of blending.

Each main type of spirit flavour we produce is designed to be 'most typical' of the type i.e. Bourbon—a medium sweet bourbon. Your own favourite brand can be closely matched by adjusting the level of flavouring/aging syrup you add.

A common household test for spirit purity is to mix your home made spirit with any one of the non-sweet mixes eg coke, tonic, lemonade. If the mix goes flat almost instantly, check the surface of the drink. The carbonated soda drink reacts with heavier oils and will leave an oil slick or scum on the top.

DON'T DRINK, RE-DISTIL

We recommend that spirit strength for rums, whiskies and gins etc be 35-40% while liqueurs should be made with 30% spirit. Spirits strength higher than these levels mask the flavour and gives drinks an unpleasant bite.

FLAVOURS

Under the Spirits Unlimited, Gold Medal, Heritage and RTR ranges there are over 185 flavours to choose from.

The Spirits Unlimited range of 50 ml concentrate flavours 5 litres, Gold medal and Heritage 2.25 litres, while the liqueur range produces 1— 1.5 litres per 50 ml and the RTR range 10 litres

From each batch of refined spirit it is easy to make one bottle of a variety of spirits and liqueurs

AGING

All spirits benefit from aging.

Bulk aging can be achieved by leaving your spirit on reflux carbon longer. Two to three weeks on carbon will certainly improve smoothness. Double carbon treatment will have a similar effect. Oak aging—Oak imparts a mellowness to whisky, rum and brandy. Using plain oak chips or treated oak will improve new spirit over a two—three month period. Alternatively the Jack Daniels, Wilson's and Plantation Rum chips made from wet distillery barrels have an immediate effect.

To soften and smooth new spirit, ageing syrup can be used. This is non sweet syrup mellows and softens instantly. The powder version (spirit mate) does a similar job.

BOTTLE AGING

It takes time for even the best concentrate to develop it's full flavour. All spirits and Liqueurs improve markedly within the first 14 days after bottling and certain liqueurs may take six months to become superb drinking.

Notes

Spirits Unlimited Ltd

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3 YEAR WARRANTY

.Congratulations on purchasing a SPIRITS UNLIMITED Still
.Manufactured in New Zealand your still will give reliable service for
many years. Please follow the care instructions.
.Should you experience any difficulties please contact your retailer first.
.Our factory staff are also happy to assist. PH(03)6880801
Happy Distilling and Cheers
Malcolm Willmott

**THIS WARRANTY COVERS MATERIALS AND WORKMAN SHIP ONLY
ELEMENTS AND POWER CORDS ARE NOT COVERED BY THIS WRRANTY**

REGISTRATION

Please complete the following and mail to:

Spirits Unlimited Ltd
60 Stafford Street
Timaru 7910

Name:

Address:

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Phone:

Date:

Where Purchased: