

Asynt

DrySyn

heating & cooling blocks

The ultimate in safe synthesis



A fresh outlook in chemistry technologies

New ideas & better solutions

The DrySyn range of heating blocks enables clean, safe synthesis for single or multiple reactions. It was developed by chemists and included valued contributions from such organisations as the Department of Chemistry, Cambridge University.

DrySyn is established as proven technology, chosen by key pharmaceutical companies, Biotechs, CRO's, schools and universities among many others.

No longer do the hazards of hot oil baths or mantles have to be a necessary health and safety risk in the laboratory, while new additions to the DrySyn family have ensured that more and more users can enjoy the clear cut benefits of this exceptional technology.

"Being able to maintain a sub ambient temperature sometimes for significant periods is really important for reproducibility. The DrySyn Snowstorm connects to an external chiller unit and holds temperatures at a set point for as long as is required. Setting temperature ramping profiles is also possible which is important in optimisation studies and an added benefit to us"

Dr Geraint Jones. Associate Director of Chemistry. Signature Discovery

Putting an end to oil bath safety hazards

Historically, chemists have used oil baths or heating mantles to heat reactions in round-bottomed flasks. However, oil baths have an inherent fire risk and as the flashpoint of silicon oil decreases with repeated use, the risk of fire becomes even greater as time passes. The cleaning of inevitable oil spillages is very time consuming. Oil baths can also emit toxic fumes and polymerise with high temperatures.

Driven by increased awareness of safety and productivity demands, the requirement for an alternative resulted in the introduction by Asynt of its DrySyn heating & cooling block range. It is now the proven alternative to oil baths and mantles, guaranteeing clean, safe synthesis while achieving the highest possible heating performance using anything from 1ml vials to 5000ml flasks.

"The Drysyn Maxi and Super Maxi have dramatically improved safety in our laboratory. We have eradicated all large oil baths and heating mantles together with the safety hazards associated with them. Leaving a reaction overnight is now so much more convenient"

*Dr Stephen Hobson,
University of Newcastle*



Safety

- ⇒ Safe heating to over 300°C
- ⇒ Safe and easy removal of flasks from heat source
- ⇒ Low well design prevents cracking or jamming of glassware
- ⇒ Chemical and solvent resistant
- ⇒ Secure lifting handles ensure safe removal from heat source

Versatility

- ⇒ Accommodate the full range of standard round bottomed flasks from 5ml to 5000ml
- ⇒ Compatible with any hotplate stirrer
- ⇒ Components available separately or as cost-effective kits
- ⇒ Compatible with multi neck flasks
- ⇒ Modular system with small footprint
- ⇒ Full range of accessories
- ⇒ Equal or better heating performance than silicone oil

Ease of use

- ⇒ Excellent reaction visibility due to shallow well and clear anodised finish

Assurance

- ⇒ Environmentally friendly
- ⇒ Supported by expert service & advice from the world leaders



DrySyn single position heating blocks

Excellent reaction visibility
from low sided DrySyn

Heat resistant handles for
safe and easy lifting

Probe hole for
temperature control

Solid aluminium base ac-
commodates large flasks

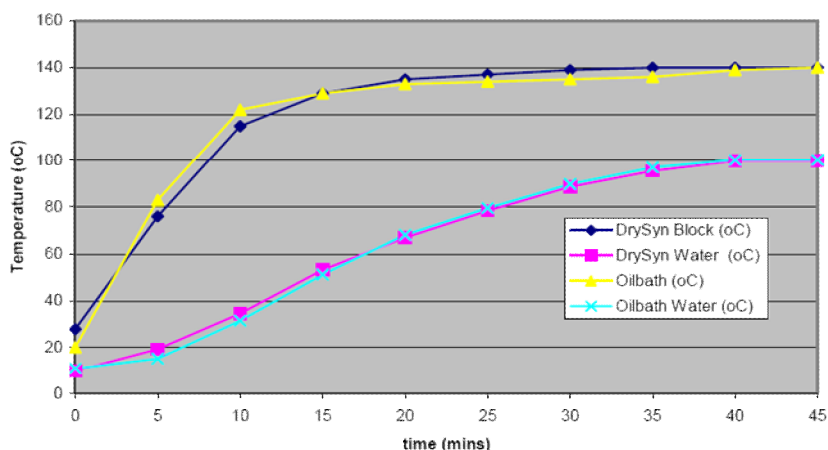
Inserts adapt the block for
smaller flasks

Fit standard hotplate stirrers
including Asynt, IKA, & Heidolph

For single reactions, the DrySyn Classic, MAXI and SuperMAXI heating blocks provide the ideal solution.

- ⇒ 50 ml to 5000ml flasks
- ⇒ Superior reaction visibility
- ⇒ Powerful, efficient stirring
- ⇒ Unique , heat resistant lifting handles as standard

DrySyn Block vs Oilbath comparison 1l flask, 750ml water, Fuzzy in block or oil bath



In performance tests, the DrySyn Classic and an oil bath showed nearly identical heating rates and solvent temperature profiles. This proved that there is no need to change chemistry protocols

DrySyn Classic

For 50 ml - 1000 ml

- ⇒ Classic base holds a 1000 ml flask, with four inserts for smaller sizes
- ⇒ Base and inserts can be ordered as separate components, if required
- ⇒ Part number: ADS1 DrySyn Classic
- ⇒ Kit comprises 1 x base, 1 each of 50/100/250/500 ml inserts, 2 x heat resistant handles



DrySyn MAXI

For 2000 ml and 3000 ml

- ⇒ MAXI base holds a 3000ml flask, with 2000 ml insert
- ⇒ Part number: ADS2 DrySyn MAXI
- ⇒ Kit comprises 1 x 3000 ml base, 1 x 2000ml insert, 2 x heat resistant handles



DrySyn SuperMAXI

For 5000 ml scale

- ⇒ Part number: ADS4 DrySyn SuperMAXI
- ⇒ Kit comprises 1 x 5000 ml base, 2 x heat resistant handles
- ⇒ SuperMAXI Plus available for 4000 ml flasks



DrySyn Scholar

For 100 ml and 250 ml - Designed with University Teaching Laboratories in mind

- ⇒ Scholar base holds 250 ml flask, with 100 ml insert.
- ⇒ Part number: ADS14 DrySyn Scholar
- ⇒ Kit comprises 1 x 250 ml base, 1 x 100 ml insert, 2 x heat resistant handles
- ⇒ DrySyn Scholar Plus available for 50 ml flasks





DrySyn MULTI parallel heating blocks

One block, multiple options

Enable a single hotplate stirrer to become a safe, flexible reaction station with the ability to perform multiple reactions from 1 ml to 20 ml vials and up to three 500 ml round bottomed flasks on a very small footprint, saving valuable fume cupboard space and extra hotplates.

The use of inserts mean that the base can be changed from a single reaction platform in a round bottomed flask to one able to perform parallel synthesis with up to 12 reactions, ideal for small parallel libraries of compounds, reaction screening/optimisation and polymorphism/crystallisation studies.

The DrySyn MULTI concept

True versatility that is so easy to configure



One reaction:
using central position



Three reactions:
Configure and combination of
flask sizes



Twelve reactions:
Using the DrySyn MULTI
reaction vial inserts

Key Benefits

- ⇒ Flexible, modular system, with small footprint
- ⇒ Safer than oil baths, equivalent heating performance
- ⇒ Fits any hotplate stirrer, base has removable feet to locate firmly
- ⇒ Components available separately or as kits, with extra inserts which can be added to build the ultimate flexible system to cope with project/chemistry changes
- ⇒ Heat up to 250 °C
- ⇒ Temperature probe hole
- ⇒ Excellent chemical resistance
- ⇒ First class reaction visibility



DrySyn MULTI

For 1 ml - 100 ml

- ⇒ DrySyn MULTI - up to 3 x 100 ml flasks or a single 250 ml or 500 ml insert in the central position
- ⇒ DrySyn MULTI inserts are compatible with all DrySyn bases
- ⇒ Part number: ADS3 DrySyn MULTI Kit
- ⇒ Kit comprises 1 x base, 3 each of 25/50/100 ml inserts



DrySyn MULTI-M

For 1 ml - 250 ml

- ⇒ DrySyn MULTI-M - up to 3 x 250 ml flasks or a single 500 ml insert in the central position
- ⇒ Part number: ADS5 DrySyn MULTI-M Kit
- ⇒ Kit comprises 1 x base, 3 x 100 ml and 3 x 250 ml inserts



DrySyn MULTI-S

For 1 ml - 500 ml

- ⇒ DrySyn MULTI-S - up to 3 x 500 ml flasks
- ⇒ Part number: ADS6 DrySyn MULTI-S Kit
- ⇒ Kit comprises 1 x base, 3 x 250 ml and 3 x 500 ml inserts



DrySyn MULTI-Reaction vial inserts

For up to twelve parallel reactions

- ⇒ Available in wide range of standard sizes to suit most popular tubes including Wheaton reactor vials, microwave tubes and boiling tubes.
- ⇒ To suit 16.20 / 17.40 / 20.20 / 24.40 / 25.75 / 28.20 as standard, most are 4 position. Pack of 3 inserts.
- ⇒ Custom sizes available



Custom DrySyn



One of the most fantastic things about the Asynt DrySyn heating and cooling system is just how versatile it is but did you know that the possibilities don't end where the standard option list does?

We will work with you to provide cost effective custom built DrySyn that is designed with you to suit your exact needs, making heating or cooling systems for you to make your processes simpler, cleaner and more efficient.

DrySyn Accessories

DrySyn MULTI Clamps

Three flasks or condensers can be held securely with a single DrySyn MULTI 3-position clamp.

- ⇒ Space saving
- ⇒ Allows safe and easy removal from heat source
- ⇒ Can be used independently - for example, to clamp three flasks over an ice bath.
- ⇒ Part number ADS3-C MULTI clamp, ADS5-C MULTI-M clamp, ADS6-C MULTI-S clamp



Safety lifting handle



The optional safety lifting handle is compatible with all DrySyn units and is a useful addition to the range.

Lab Safety Shield



Ideal for use where fume hood space is at a premium, the Safety Shield offers additional protection for chemists from splashes, and also reduces issue with fume hood drafts.

Asynt magnetic hotplate stirrer & temperature controller



With a Hotplate stirrer, temperature sensor, electronic contact thermometer, holding rod, support rod and the boss head clamp you're all set to start heating at controlled temperatures.

- ⇒ Stronger motor for a higher range of speeds
- ⇒ Integrated temperature control
- ⇒ Exact temperature and speed setting via digital display, even when switched off.
- ⇒ Hot Top indicator - hot surface warning to prevent burns.
- ⇒ With adjustable safety circuit of heating plate temperature
- ⇒ Safety magnetic stirrer with heating, suitable for unsupervised operation.
- ⇒ Bushing according to DIN 12878 for connecting a contact thermometer enables precise temperature control.
- ⇒ Enclosed assembly guarantees long service life

Reaction vials



Asynt supplies a range of Wheaton V-Vials that are compatible with DrySyn MULTI 4-position vial inserts. Vials are available in a graduated or non-graduated form.

Replacement lids and septum, are also available.

DrySyn cooling with SnowStorm

One system, multiple options from ambient to -30°C

Sub-ambient reactions with a small footprint, without the requirement for jacketed vessels.

Built on the success of the DrySyn heating blocks, DrySyn SnowStorm is an integrated concept for cooling. The modular system offers capability for standard round bottomed flasks from 50 ml to 1000 ml in addition to reaction vials from 2 ml, and the DrySyn SNOWSTORM dome allows great potential for both heated and cooled reactions avoiding temperature fluctuation which gives excellent reproducibility.

- ⇒ Compatible with any laboratory circulator or chiller system and any magnetic stirrer
- ⇒ Exchange of reaction vessels without disrupting the thermal bath fluid
- ⇒ Temperature control for prolonged periods of time avoiding ice bath solvent concoction
- ⇒ Very small footprint saving valuable fume cupboard space
- ⇒ Low cost compared to Jacketed Glass Reaction Vessels, especially for multiple sizes
- ⇒ Exchange glassware and reconfigure system in seconds
- ⇒ Robust durable system with long life
- ⇒ Unsupervised overnight reactions possible
- ⇒ Low cost compared to Jacketed Glass Reaction Vessels, especially for multiple sizes
- ⇒ Can also heat up to 150°C when attached to a circulator
- ⇒ Ideal for precise temperature ramping when performing crystallisation studies



SnowStorm ONE

For 50 ml - 1000 ml

- ⇒ Compatible with any laboratory circulator or chiller system with inserts for standard round bottomed flasks from 50 ml to 1000 ml
- ⇒ Part number ADS8 DrySyn SnowStorm ONE
- ⇒ Comprises 1 x base, 2 x hose barb, 1 x 50 ml / 100 ml / 250 ml / 500 ml / 1000 ml inserts



SnowStorm MULTI

For 25 ml - 100 ml

- ⇒ Compatible with any laboratory circulator or chiller system with inserts for standard round bottomed flasks from 25 ml to 100 ml
- ⇒ Part number ADS10 DrySyn SnowStorm MULTI
- ⇒ Comprises 1 x base, 2 x hose barb, flask seals, 3 x 25 ml / 50 ml / 100 ml inserts



SnowStorm Reactor

For 2 ml - 20 ml vials as standard

- ⇒ Compatible with any laboratory circulator or chiller system with inserts for wide variety of standard tubes or vials
- ⇒ Flexible system allowing for different inserts to be used at one time and easily exchanged in seconds
- ⇒ Purging the dome with nitrogen / argon prevents the formation of ice, around the reactors, at sub-ambient temperatures
- ⇒ Part number ADS113-S DrySyn SnowStorm Reactor
- ⇒ Comprises 1 x base, 2 x hose barb, 1 set of 3 x reaction vial inserts
- ⇒ Choose from standard sizes 16.20 / 17.40 / 20.20 / 24.40 / 25.75 / 28.20 (all 4 position except 28.20 which is 3 position)
- ⇒ Custom kit option available with inserts made to your specification suitable for tubes up to 28.20 mm diameter





DrySyn: The Green
Heating & Cooling System

Asynt 

www.asynt.com

29 Hall Barn Road Industrial Estate, Isleham. Ely,

Cambridgeshire, CB7 5RJ

T: 00 44 (0)1638 781709

E: sales@asynt.com



Please consider the impact on our environment before printing this literature.