



Instructions

**StarFish™**

**Water & Gas/Vacuum  
Distribution Manifolds**

 **Heidolph**  
*Research made easy*

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**Thank you for purchasing your StarFish Distribution Manifold**

**Please read this Instruction Manual thoroughly before operating your unit.**

## **Introduction**

**The StarFish Distribution Manifolds form part of the StarFish family of products that enable you to perform productive heating and stirring experiments using existing glassware and stirring hotplates.**

The versatile Distribution Manifolds allow a coolant or a gas / vacuum to be evenly distributed to up to five vessels simultaneously.

### **Space saving.....**

Innovative compact design saves space.

### **Safe working.....**

Separate and easily identifiable Water and Gas / Vacuum Manifolds to prevent incorrect connection of fluid and gas supplies

### **Productivity.....**



Quick release connectors on inlet and outlets for quick and easy connection to vessels

### **Versatility.....**

All connectors feature leak proof shut off valves that automatically close when the couplings are parted, allowing manifolds to be used with up to 5 condensers without daisy chaining.

# Safety Information

The following symbols are intended to assist the user in the safe and efficient operation of the StarFish.

	<b>Warning</b> Applies when there is a possibility of personal injury.
	<b>Important Note</b> Alerts the user to important facts.

## Important WARNINGS

Please read these instructions completely before using your Distribution Manifold.

Operate only in a fume cupboard with protective safety sash.

To avoid the build up of lime scale in the Water Distribution Manifold, please avoid the use of hard water.

The Manifolds are only suitable for the distribution of water (505-81030-00) or inert gas/vacuum (505-81040-00).

The Distribution Manifold should only be operated by trained and competent personnel.

As with all chemistry, care should be taken to monitor your experiment at all stages.

The Manifold should not be left unattended unless in a supervised area.



### Important Note

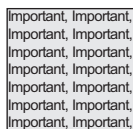
Water Manifold 505-81030-00 is fitted with a female inlet/outlet connector, whilst the Gas/Vacuum Manifold 505-81040-00 is fitted with a male inlet/outlet connector. This prevents incorrect connection of fluid and gas supplies.



### Warning

The manifold can be used for both vacuum and gas purging.

The maximum operating pressure is 0,2mbar above atmospheric pressure and a vacuum of approximately 150 to 125mbar.



### Important Note

All of the connectors feature leak-proof shut-off valves that are automatically closed when the couplings are parted. This enables the manifold to be used with any number of vessels (up to five) without daisy-chaining.



### Warning

Acetal Quick release fittings may be adversely affected by direct exposure to chemical solutions or vapours.

# Products & Accessories

Heidolph Cat No.	Description	Pk Qty
<b>MR Hei-End Multi-Workstation Complete System</b>		
505-81100-00	1 x Magnetic Stirrer MR Hei-End, Pt1000 (V4A), Base Plate (145mm) 1 x Monoblock for 5 x 250ml Flasks 2 x Inserts for 100ml Flasks 2 x Inserts for 50ml Flasks 1 x Inserts for 25ml Flask 1 x 5-way Clamp inc Velcro 1 x 5-way Clamp inc Silicone Strap & Handle 2 x Water Manifolds with connectors 1 x Gas/Vacuum Manifold with connectors 1 x 650mm Split Rod	
<b>MonoBlocks</b>		
505-80001-00	<b>MonoBlock</b> for 5 x 250ml Flasks	1
505-80002-00	<b>MonoBlock</b> for 16 x 25mm Tubes	1
505-80003-00	<b>MonoBlock</b> for 16 x 24mm Tubes	1
505-80004-00	<b>MonoBlock</b> for 40 x 16mm Tubes	1
505-80005-00	<b>MonoBlock</b> for 40 x 12mm Tubes	1
505-80006-00	<b>MonoBlock</b> for 16 x 28mm Vials	1
505-80007-00	<b>MonoBlock</b> for 20 x 21mm Vials (4 dram)	1
505-80008-00	<b>MonoBlock</b> for 40 x 17mm Vials (2 dram)	1
505-80009-00	<b>MonoBlock</b> for 40 x 15mm Vials (1 dram)	1
505-80010-00	<b>MonoBlock</b> for 40 x 12mm Vials (2ml)	1
<b>PolyBlocks</b>		
505-80020-00	<b>PolyBlock</b> for 1 x 250ml Flask	1
505-80021-00	<b>PolyBlock</b> for 3 x 25mm Tubes	1
505-80022-00	<b>PolyBlock</b> for 3 x 24mm Tubes	1
505-80023-00	<b>PolyBlock</b> for 9 x 16mm Tubes	1
505-80024-00	<b>PolyBlock</b> for 9 x 12mm Tubes	1
505-80025-00	<b>PolyBlock</b> for 3 x 28mm Vials	1
505-80026-00	<b>PolyBlock</b> for 3 x 21mm Vials (4 dram)	1
505-80027-00	<b>PolyBlock</b> for 7 x 17mm x Vials (2 dram)	1
505-80028-00	<b>PolyBlock</b> for 9 x 15mm x Vials (1 dram)	1
505-80029-00	<b>PolyBlock</b> for 9 x 12mm x Vials (2ml)	1
<b>StarFish Distribution Manifolds</b>		
505-81030-00	Water Manifold with connectors	1
505-81040-00	Gas/Vacuum Manifold with connectors	1
<b>StarFish Bases</b>		
505-81000-00	Base Plate 145mmø	1
<b>Base Plate Handles</b>		
505-81001-00	StarFish Base Plate Handles (Pair)	2
<b>StarFish Inserts</b>		
505-80040-00	150ml Flask Insert	1
505-80041-00	100ml Flask Insert	1
505-80042-00	50ml Flask Insert	1
505-80043-00	25ml Flask Insert	1
505-80044-00	10ml Flask Insert	1
505-80045-00	5ml Flask Insert	1
<b>StarFish Support Rods</b>		
505-80050-00	650mm Rod	1
505-80060-00	650mm Split Rod	1
<b>StarFish Clamp</b>		
505-81010-00	Universal Telescopic 5-way Clamp (with Velcro)	1
505-81020-00	Universal Telescopic 5-way Clamp (with Silicone Strap & Handle)	1
505-81070-00	Replacement Self Adhesive Velcro Pads	10
505-81080-00	Replacement Velcro Loop Strips 200mm	5
505-81090-00	Replacement Silicone Straps 200mm	5

# Set-Up & Operation - Water Distribution Manifolds

## Water Distribution Manifold

Water Distribution Manifolds have been designed to allow coolant from a single source to be evenly distributed to up to five condensers and then the flow re-combined to one outlet pipe. Two manifolds are used in each system, one to distribute water to the condensers and one to collect coolant for recirculation or to drain.

1. Confirm that the manifolds are Water Manifolds rather than Gas/Vacuum Manifolds. The Water Manifold is identified by the label and fitted with a female connector on the side of the manifold body.

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### Important Note

Water Manifold is fitted with a female inlet/outlet connector, whilst the Gas/Vacuum Manifold is fitted with a male inlet/outlet connector. This prevents incorrect connection of fluid and gas supplies.

2. Place both Water Manifolds over the top of support rod and slide down to the desired position and fix with the thumbwheel. (It does not matter which way up the manifolds are fitted to the support rod). The Manifold will accept support rods up to a maximum of 12mm OD.
3. Push the the large barbed connector (supplied with the Water Manifold) into your water inlet tubing. (For suitable tubing please order - 8mm x 15m clear Tygon Tubing).

*NB. The connector has a 9.6mm OD barb with an 6.4mm bore and accepts flexible tubing with an 8mm ID.*

4. Now the tubing is connected to the connector, insert it into the female connector on the side of the lower of the two Water Manifolds. It will click in place.
5. Repeat the procedure with the water outlet/drain tubing. Connecting it to the connector on the upper of the two Water Manifolds.
6. Connect the tubing from each of your condenser inlets to a right-angled connector are supplied with each Water Manifold). (For suitable tubing please order - 6.4mm x 15m clear Tygon Tubing).

*NB. The right-angled connector has a 6.4mm OD barb with an 3.2mm bore and accepts flexible tubing with an 6.4mm ID.*

7. Now the tubing is connected to the right angled connector, insert it into any one of the five female connectors on the top of the lower Water Manifold. It will click in place.
8. Repeat the procedure with the upper Water Manifold, connecting each of the condenser outlets to the manifold. For best results coolant should always enter the bottom of you condenser and exit at the top.
9. A water flow rate of at least 1.5 litres per minute should be used to maintain even distribution to each condenser.

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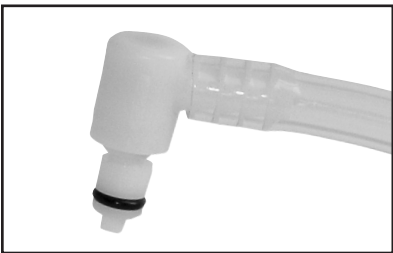
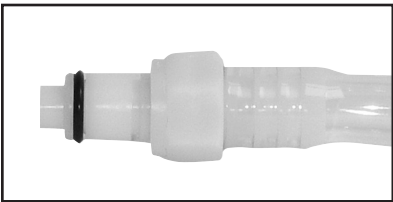
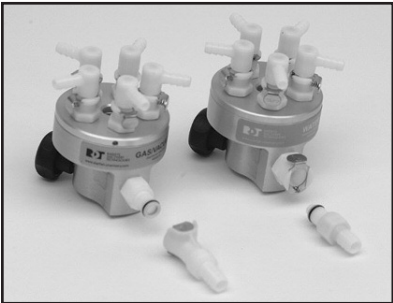
### Important Note

All of the connectors feature leak-proof shut-off valves that are automatically closed when the couplings are parted. This enables the manifold to be used with any number of condensers (up to five) without daisy-chaining.

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### Important Note

To avoid the build-up of lime scale in the Water Distribution Manifold, please avoid the use of hard water.



# Set-Up & Operation - Gas/Vacuum Distribution Manifold

## Gas/Vacuum Distribution Manifold

Gas/Vacuum Distribution Manifolds have been designed to allow gas or a vacuum from a single source to be evenly distributed to up to five vessels.

1. Confirm that the manifold is Gas/Vacuum Manifold rather than a Water/Coolant Manifold. The Gas/Vacuum Manifold is identified by the label and fitted with a male connector on the side of the manifold body.

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### Important Note

Water Manifold is fitted with a female inlet/outlet connector, whilst the Gas/Vacuum Manifold is fitted with a male inlet/outlet connector. This prevents incorrect connection of fluid and gas supplies.

2. Place the Gas/Vacuum Manifold over the top of support rod and slide down to the desired position and fix with the thumbwheel. (It does not matter which way up the manifold is fitted to the support rod). The Manifold will accept support rods up to a maximum of 12mm OD.
3. Push the the large barbed connector (supplied with the Gas/Vacuum Manifold) into your gas inlet tubing. (For suitable tubing please order - 8mm x 15m clear Tygon Tubing).

*NB. The connector has a 9.6mm OD barb with an 6.4mm bore and accepts flexible tubing with an 8mm ID.*

4. Now the tubing is connected to the connector, insert it into the male connector on the side of Gas/Vacuum Manifold. It will click in place.
5. Connect the tubing from each of your vessels to a right-angled connector (5 are supplied with each Gas/Vacuum Manifold). (For suitable tubing please order - 6.4mm x 15m clear Tygon Tubing).

*NB. The right-angled connector has a 6.4mm OD barb with an 3.2mm bore and accepts flexible tubing with an 6.4mm ID.*

6. Now the tubing is connected to the right angled connector, insert the connector into any one of the five female connectors on the top of the Gas/Vacuum Manifold. It will click in place.



### Warning

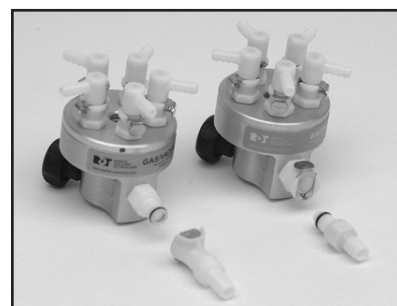
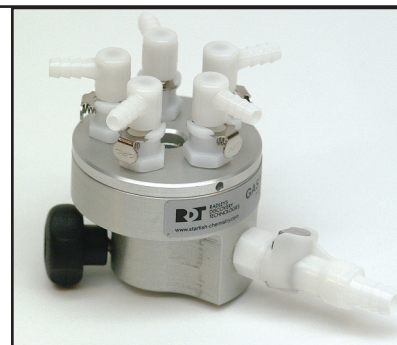
The manifold can be used for both vacuum and gas purging.

The maximum operating pressure is 0,2mbar above atmospheric pressure and a vacuum of approximately 150 to 125mbar.

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### Important Note

All of the connectors feature leak-proof shut-off valves that are automatically closed when the couplings are parted. This enables the manifold to be used with any number of vessels (up to five) without daisy-chaining.





# Warranty & Liability

## Warranty

Heidolph Scientific Products GmbH provides a three-year warranty against material and manufacturing defects. Glass and wear parts, transportation damage, and damage resulting from improper handling or non-intended use of the product are excluded from the warranty. The warranty period for registered products begins on the date of purchase.

Register the product with the enclosed warranty card or on our homepage [www.heidolph.com](http://www.heidolph.com). For non-registered products, the warranty period begins with the date of the serial production (to be determined by the serial number). In the event of material or manufacturing defects, the product will either be repaired or replaced free of charge within the warranty period.

Misuse, abuse, neglect or improper installation are not covered by this warranty promise.

Alterations to the present warranty promise need Heidolph Scientific Products GmbH consent in writing.

## Exclusion of liability

Heidolph Scientific Products GmbH cannot be held liable for damage from improper use or misuse.

Remedy for consequential damage is excluded.

## Questions & Repairs

If any aspect of installation, operation or maintenance remains unanswered in the present manual, please contact: [Sales@heidolph.de](mailto:Sales@heidolph.de)

For equipment repair jobs please contact [service@heidolph.de](mailto:service@heidolph.de)

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### Important Note

When returning instruments for repair that have come in contact with hazardous substances, please provide precise information on the relevant medium, take protective measures to ensure the safety of our receiving and maintenance personnel and mark the package as appropriate for hazardous materials.





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