# ARGENTO SCIENTIFIC

## **Closed Systems** for laboratory solvents



#### Solvent Extraction

# 0 0

## **Closed Systems**

Safer solvent extraction and waste collection in laboratory instruments

Minimize exposure to harmful solvent fumes and vapors

## Capture solvent waste

securely, without leaks or drips, without foil or lab film

## **Reduce evaporation**

of expensive chemical reagents

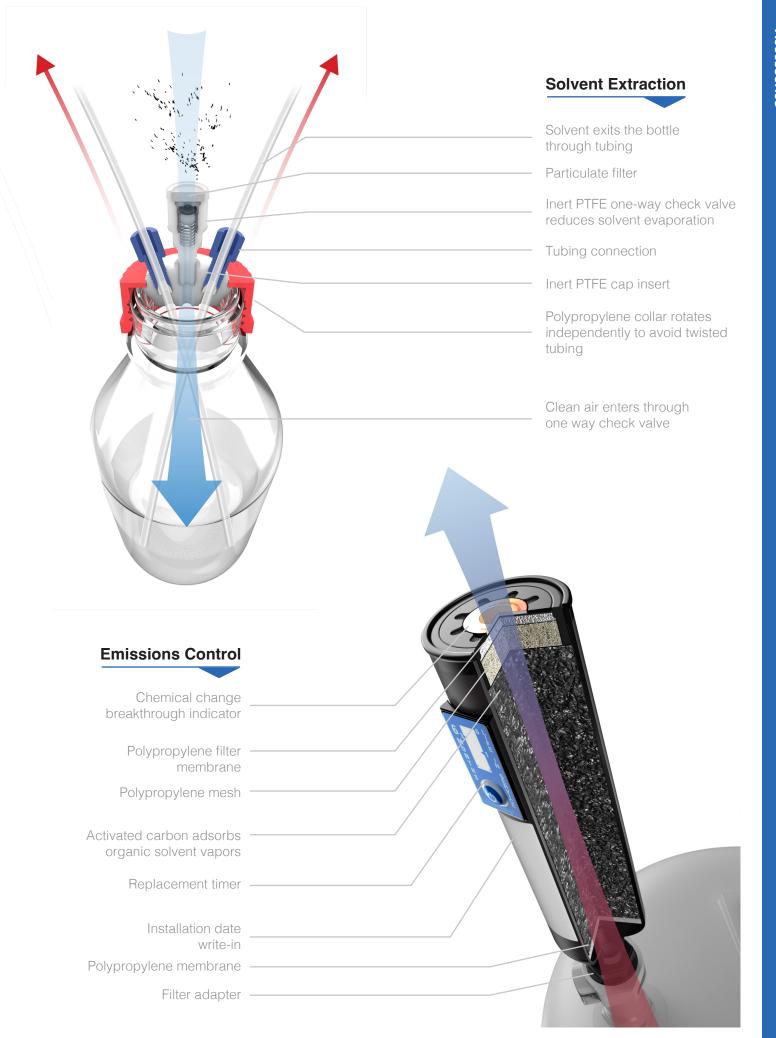
**Emissions Control** 

Waste Collection

Many lab instruments (such as HPLC, LC-MS, FPLC, ICP, and others) require use of volatile organic solvents which can be health and safety concerns for those working in proximity to these machines.

Because these are "active" systems — pumping solvent from one reservoir to the instrument and then to waste — a containment solution for both pure reagents and waste effluent must allow for air flow in or out of containers, while **mitigating both evaporation and solvent fumes**.

The products listed here provide a **closed**-**system solution** to this problem.



## **Exhaust Filters**

For HPLC emission reduction

## **Active Solvent Adsorption**

Reduce toxic fumes and noxious odors from HPLC solvent waste by vapor capture onto activated carbon exhaust filters. Available in 3-month or 6-month configurations, each filter includes a single-use timer to provide an estimated replacement date.\* For real-time end of service life detection, or for use with normal phase or aggressive solvents, select filters with a chemical-change breakthrough indicator to reveal a color change after exposure to organic solvents.

## Adaptable Design

Suitable for continuous flow of solvent vapor on analytical or semi-preparative HPLC instruments, the filters are constructed of HDPE and Polypropylene and may be attached to various point-source emissions by adapting to the 1/4" NPT female port at the receiving end of the filter.

\*based on use with reverse-phase organic solvents on analytical-scale HPLC instruments.





## 3-Month or 6-Month Timer

At the press of a button, initiate a replacement date for the filter and display the estimated end of service life.





## Chemical Change Breakthrough Indicator - AR-IN01

For real-time solvent breakthrough indication, use of a chemical-change indicator is recommended.



Part Number	Description	U/M	
Medium Filters	s		
AR-CFM	Exhaust Filter, Medium	Each	
AR-CFM-5PK	Exhaust Filter Pack, Medium	5/PK	
AR-CFMI	Exhaust Filter w/ Indicator, Medium	Each	
AR-CFMI-5PK	Exhaust Filter Pack w/ Indicator, Medium	5/PK	
Large Filters			
AR-CFL	Exhaust Filter, Large	Each	
AR-CFLI	Exhaust Filter w/ Indicator, Large	Each	
Chemical Change Breakthrough Indicators			
AR-IN01	Breakthrough Indicator, Chemical Change	Each	
AR-IN01-5PK	Indicator Pack, Chemical Change	5/PK	



**AR-CFLI** Exhaust Filter w/ Indicator, Large

# Filter Adapters Attach to various emmision sources

## One recieving port, many options

Whether attaching an exhaust filter to a collection manifold or to a quick disconnect on a safety can, select from these adapters based on height limitations above the container.





**AR-FJPAA** Justrite<sup>®</sup> PP Adjustable

AR-FJSAA Justrite<sup>®</sup> SS Adjustable



**AR-FJPPL** Justrite<sup>®</sup> PP 90\* Elbow



**AR-FJPP** Justrite® Plastic

## Justrite<sup>®</sup> Plastic





AR-FJSP Justrite® SS

**AR-FJSPL** 

#### Justrite<sup>®</sup> SS





Part Number	Description	Material
Filter Adapters	s – Type C Ports – 1/8" NPT	
AR-FACA	1/8" MNPT X 1/4" MNPT, Adjustable	Acetal
AR-FPCL	1/8" MNPT X 1/4" MNPT, 90* Elbow	PP
AR-FPCL45	1/8" MNPT X 1/4" MNPT, 45* Elbow	PP
AR-FPC	1/8" MNPT X 1/4" MNPT	PP
Filter Adapters	s – Type D Ports – 1/4" NPT	
AR-FADA	1/4" MNPT X 1/4" MNPT, Adjustable	Acetal
AR-FPDL	1/4" MNPT X 1/4" MNPT, 90* Elbow	PP
AR-FPDL45	1/4" MNPT X 1/4" MNPT, 45* Elbow	PP
AR-FPD	1/4" MNPT X 1/4" MNPT	PP
Filter Adapters	s – Type E Ports – 1/2" NPT	
AR-FAEA	1/2" MNPT X 1/4" MNPT, Adjustable	Acetal
AR-FPEL	1/2" MNPT X 1/4" MNPT, 90* Elbow	PP
AR-FPEL45	1/2" MNPT X 1/4" MNPT, 45* Elbow	PP
AR-FPE	1/2" MNPT X 1/4" MNPT	PP
Filter Adapters	- Justrite <sup>®</sup> Plastic Quick Disconnect	
AR-FJPAA	Justrite <sup>®</sup> PP Adjustable	PP/Acetal
AR-FJPPL	Justrite <sup>®</sup> PP 90* Elbow	PP
AR-FJPP	Justrite <sup>®</sup> Plastic	PP
Filter Adapters – Justrite <sup>®</sup> Stainless Steel Quick Disconnect		
AR-FJSAA	Justrite <sup>®</sup> SS Adjustable	PP/Acetal
AR-FJSPL	Justrite <sup>®</sup> SS 90* Elbow	PP
AR-FJSP	Justrite <sup>®</sup> SS	PP



AR-FACA 1/8" MNPT X 1/4" MNPT Adjustable



**AR-FPCL** 1/8" MNPT X 1/4" MNPT 90\* Elbow



**AR-FPCL45** 1/8" MNPT X 1/4" MNPT 45\* Elbow



**AR-FPC** 1/8" MNPT X 1/4" MNPT



**AR-FADA** 1/4" MNPT X 1/4" MNPT Adjustable



**AR-FPDL** 1/4" MNPT X 1/4" MNPT 90\* Elbow



**AR-FPDL45** 1/4" MNPT X 1/4" MNPT 45\* Elbow



**AR-FPD** 1/4" MNPT X 1/4" MNPT



AR-FALA 1/2" MNPT X 1/4" MNPT Adjustable



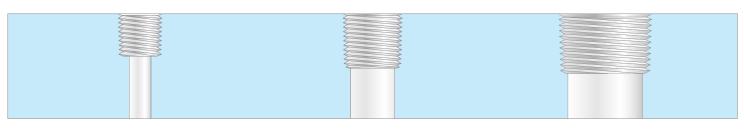
**AR-FPEL** 1/2" MNPT X 1/4" MNPT 90\* Elbow



**AR-FPEL45** 1/2" MNPT X 1/4" MNPT 45\* Elbow



**AR-FPE** 1/2" MNPT X 1/4" MNPT





## 38-400 shallow thread

Waste Collection

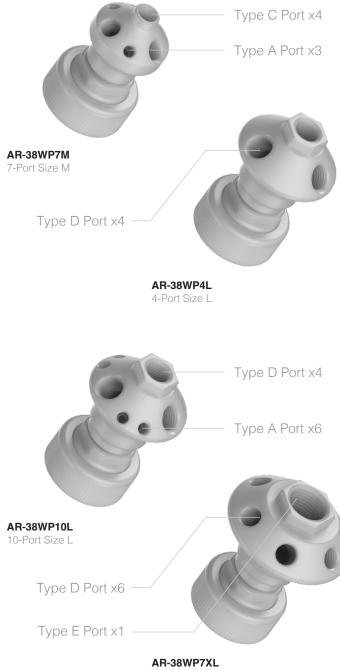
For Wako® and Cubitainer® 38mm bottles



## **Container Type and Thread Size**

A close cousin to the taller 38-430 finish, outside of laboratory circles the 38-400 thread is perhaps far more ubiquitous - appearing on household containers from dairy products to spice jars. In the lab, this thread is found on name brand bottles such as Wako<sup>®</sup> Chemicals - in both glass and plastic versions - and Cubitainer<sup>®</sup>, which offers many packaging options including collapsible containers and "boxed bottles" for easy shipment of liquids.

Although similar in appearance to the Nalgene<sup>®</sup> 38-415 thread, the two are not compatible.



4-Port Size XL

36.8mm - 37.5mm



Part Number	Description	# of Ports
Manifolds for	Wako 38-400	
AR-38WP7M	7-Port, Size M, Polypropylene	3A, 4C
AR-38WX7M	7-Port, Size M, PTFE	3A, 4C
AR-38WP4L	4-Port, Size L, Polypropylene	4D
AR-38WP10L	10-Port, Size L, Polypropylene	6A, 4D
AR-38WP7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K38WP-A	Waste Kit Basic	6A, 4D
AR-K38WP-B	Waste Kit Plus	6A, 4D



**AR-K38WP-A** Basic Waste Kit

## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

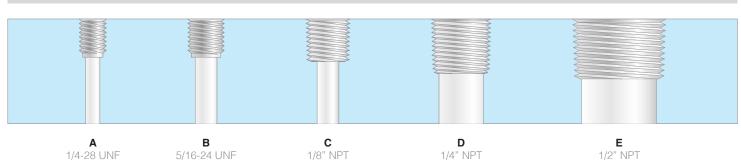
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K38WP-B** Plus Waste Kit



## 38-400 shallow thread

For Wako® and Cubitainer® 38mm bottles



#### **Solvent Extraction**

Although practically all the bottle caps provided here could be used for either solvent extraction or waste collection, the difference in function lies in how ventilation is handled.

During solvent extraction, air must enter the bottle to displace solvent removed - a problem resolved with a oneway check valve. The removeable valve is constructed of inert PTFE components with stainless spring, compatible with most laboratory solvents, with a low opening pressure below 1psi to avoid pump cavitation.

Tubing is secured to threaded ports ("Type A" 1/4-28) in inert PTFE inserts. The insert rotates independently from the Polypropylene cap collar - a feature which prevents twisted tubing when the cap is removed. The tubing connections provided are for 1/8" (3.2mm) OD tubing.





## Available 2024

Part Number	Description	Tube Ports
1-Tube Caps		
AR-38WX1T-V	1 open port w/ valve	1A
AR-38WX1T-VF	1-tube w/ valve + fittings	1A
2-Tube Caps		
AR-38WX2T	2 open ports	2A
AR-38WX2T-F	2-tube w/ fittings, 1 plug	2A
AR-38WX2T-V	2 open ports w/ valve	2A
AR-38WX2T-VF	2-tube w/ valve + fittings, 1 plug	2A
3-Tube Caps		
AR-38WX3T	3 open ports	ЗA
AR-38WX3T-F	3-tube w/ fittings, 2 plugs	ЗA
AR-38WX3T-V	3 open ports w/ valve	ЗA
AR-38WX3T-VF	3-tube w/ valve + fittings, 2 plugs	ЗA
4-Tube Caps		
AR-38WX4T	4 open ports	4A
AR-38WX4T-F	4-tube w/ fittings, 3 plugs	4A
AR-38WX4T-V	4 open ports w/ valve	4A
AR-38WX4T-VF	4-tube w/ valve + fittings, 3 plugs	4A
5-Tube Caps		
AR-38WX5T	5 open ports	5A
AR-38WX5T-F	5-tube w/ fittings, 4 plugs	5A
Check Valve		
AR-CVX1	1-Way Check Valve, Inert PTFE	





AR-38WX1T-V 1 open port w/ valve



1-tube w/ valve + fitting



3

Tubes

AR-38WX2T 2 open ports



AR-38WX2T-F 2-tube w/fittings 1 plug



AR-38WX2T-V 2 open ports w/ valve



AR-38WX2T-VF 2-tube w/ valve + fittings 1 plug



AR-38WX3T-VF 3-tube w/ valve + fittings 2 plugs



AR-38WX3T 3 open ports



AR-38WX3T-F 3-tube w/fittings 2 plugs



AR-38WX3T-V 3 open ports w/ valve



AR-38WX4T 4 open ports



AR-38WX4T-F 4-tube w/fittings 3 plugs



AR-38WX4T-V 4 open ports w/ valve



AR-38WX4T-VF 4-tube w/ valve + fittings 3 plugs



AR-38WX5T 5 open ports



AR-38WX5T-F 5-tube with fittings 4 plugs

## GL38

## For 38-430 glass threaded bottles



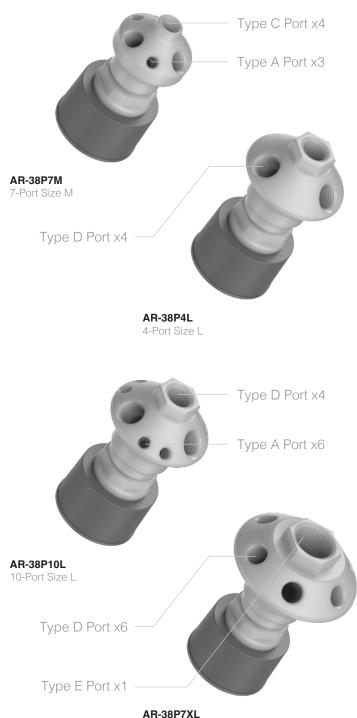
## **Container Type and Thread Size**

The 4-liter amber glass bottle with distinctive finger grip is as common in most labs as Parafilm<sup>®</sup> and pipettes. Used by many chemical manufacturers as the containment vessel of choice for solvents, these bottles are (thankfully) supplied with a more-or-less standardized finish: the "GL38" 38-430 glass thread. Although compatible with 38-430 caps used on some plastic bottles - such as Nalgene - it's important to note that the GL38 caps supplied here are not deep enough to engage and seal on many plastic 38-430 bottles.

Watch out for 38mm thread variants: increasingly, chemical suppliers utilize a 38-415 thread on 4L bottles instead of the more common 38-430. Although identical in appearance, these two threads aren't interchangeable.







Waste Collection

7-Port Size XL

Part Number	Description	# of Ports
Manifolds for	GL38	
AR-38P7M	7-Port, Size M, Polypropylene	3A, 4C
AR-38X7M	7-Port, Size M, PTFE	3A, 4C
AR-38P4L	4-Port, Size L, Polypropylene	4D
AR-38P10L	10-Port, Size L, Polypropylene	6A, 4D
AR-38P7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K38P-A	Waste Kit Basic	6A, 4D
AR-K38P-B	Waste Kit Plus	6A, 4D





## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

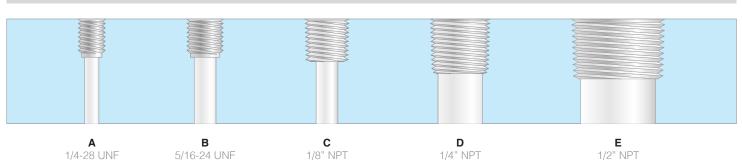
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K38P-B** Plus Waste Kit



## **GL38** For 38-430 glass threaded bottles



#### **Solvent Extraction**

Although practically all the bottle caps provided here could be used for either solvent extraction or waste collection, the difference in function lies in how ventilation is handled.

During solvent extraction, air must enter the bottle to displace solvent removed - a problem resolved with a oneway check valve. The removeable valve is constructed of inert PTFE components with stainless spring, compatible with most laboratory solvents, with a low opening pressure below 1psi to avoid pump cavitation.

Tubing is secured to threaded ports ("Type A" 1/4-28) in inert PTFE inserts. The insert rotates independently from the Polypropylene cap collar - a feature which prevents twisted tubing when the cap is removed. The tubing connections provided are for 1/8" (3.2mm) OD tubing.





## Available 2024

Part Number	Description	Tube Ports
1-Tube Caps		
AR-38X1T-V	1 open port w/ valve	1A
AR-38X1T-VF	1-tube w/ valve + fittings	1A
2-Tube Caps		
AR-38X2T	2 open ports	2A
AR-38X2T-F	2-tube w/ fittings, 1 plug	2A
AR-38X2T-V	2 open ports w/ valve	2A
AR-38X2T-VF	2-tube w/ valve + fittings, 1 plug	2A
3-Tube Caps		
AR-38X3T	3 open ports	ЗA
AR-38X3T-F	3-tube w/ fittings, 2 plugs	ЗA
AR-38X3T-V	3 open ports w/ valve	ЗA
AR-38X3T-VF	3-tube w/ valve + fittings, 2 plugs	ЗA
4-Tube Caps		
AR-38X4T	4 open ports	4A
AR-38X4T-F	4-tube w/ fittings, 3 plugs	4A
AR-38X4T-V	4 open ports w/ valve	4A
AR-38X4T-VF	4-tube w/ valve + fittings, 3 plugs	4A
5-Tube Caps		
AR-38X5T	5 open ports	5A
AR-38X5T-F	5-tube w/ fittings, 4 plugs	5A
Check Valve		
AR-CVX1	1-Way Check Valve, Inert PTFE	





1-tube w/ valve + fitting





AR-38X2T 2 open ports



AR-38X2T-F 2-tube w/fittings 1 plug



AR-38X1T-V

1 open port w/ valve

AR-38X2T-V 2 open ports w/ valve



AR-38X2T-VF 2-tube w/ valve + fittings 1 plug



AR-38X3T 3 open ports



AR-38X3T-F 3-tube w/fittings 2 plugs



AR-38X3T-V 3 open ports w/ valve



AR-38X3T-VF 3-tube w/ valve + fittings 2 plugs





AR-38X4T 4 open ports



AR-38X4T-F 4-tube w/fittings 3 plugs



AR-38X4T-V 4 open ports w/ valve



AR-38X4T-VF 4-tube w/ valve + fittings 3 plugs



AR-38X5T 5 open ports



AR-38X5TF 5-tube with fittings 4 plugs

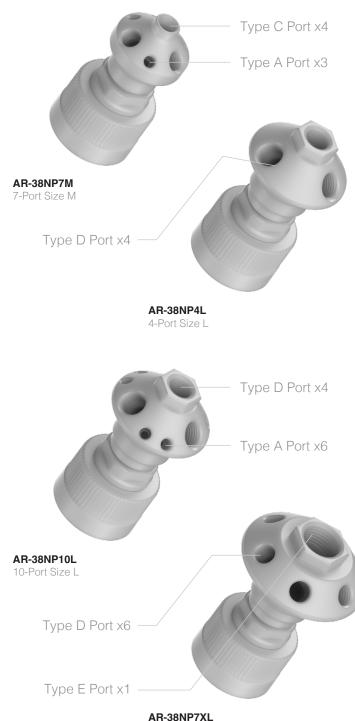
# **38-430 plastic thread** For Nalgene® and similar plastic bottles



## **Container Type and Thread Size**

In most regards the 38-430 plastic bottle thread is identical to the GL38 glass version, with the noted difference that a small shoulder has been introduced to the mouth of the plastic bottle which raises the required depth of the cap. This inconvenient change means that the GL38 safety caps offered in the previous pages are too shallow to engage and seal on a plastic 38-430 threaded bottle.

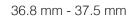
In our experience, the most common 38-430 plastic bottles are from the Nalgene® brand, although several other manufacturers make bottles with similar finishes which seem to follow the same standard.



Waste Collection

7-Port Size XL

Part Number	Description	# of Ports
Manifolds for	38-430 Nalgene	
AR-38NP7M	7-Port, Size M, Polypropylene	3A, 4C
AR-38NX7M	7-Port, Size M, PTFE	3A, 4C
AR-38NP4L	4-Port, Size L, Polypropylene	4D
AR-38NP10L	10-Port, Size L, Polypropylene	6A, 4D
AR-38NP7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K38NP-A	Waste Kit Basic	6A, 4D
AR-K38NP-B	Waste Kit Plus	6A, 4D









## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

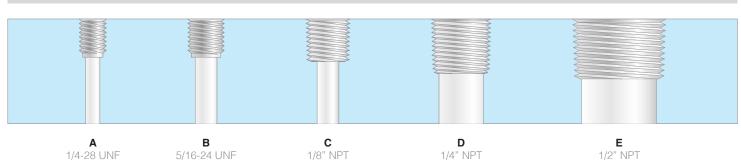
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K38NP-B** Plus Waste Kit



## 38-430 plastic thread

For Nalgene® and similar plastic bottles



#### **Solvent Extraction**

Although practically all the bottle caps provided here could be used for either solvent extraction or waste collection, the difference in function lies in how ventilation is handled.

During solvent extraction, air must enter the bottle to displace solvent removed - a problem resolved with a oneway check valve. The removeable valve is constructed of inert PTFE components with stainless spring, compatible with most laboratory solvents, with a low opening pressure below 1psi to avoid pump cavitation.

Tubing is secured to threaded ports ("Type A" 1/4-28) in inert PTFE inserts. The insert rotates independently from the Polypropylene cap collar - a feature which prevents twisted tubing when the cap is removed. The tubing connections provided are for 1/8" (3.2mm) OD tubing.





## Available 2024

Part Number	Description	Tube Ports
1-Tube Caps		
AR-38NX1T-V	1 open port w/ valve	1A
AR-38NX1T-VF	1-tube w/ valve + fittings	1A
2-Tube Caps		
AR-38NX2T	2 open ports	2A
AR-38NX2T-F	2-tube w/ fittings, 1 plug	2A
AR-38NX2T-V	2 open ports w/ valve	2A
AR-38NX2T-VF	2-tube w/ valve + fittings, 1 plug	2A
3-Tube Caps		
AR-38NX3T	3 open ports	ЗA
AR-38NX3T-F	3-tube w/ fittings, 2 plugs	ЗA
AR-38NX3T-V	3 open ports w/ valve	ЗA
AR-38NX3T-VF	3-tube w/ valve + fittings, 2 plugs	ЗA
4-Tube Caps		
AR-38NX4T	4 open ports	4A
AR-38NX4T-F	4-tube w/ fittings, 3 plugs	4A
AR-38NX4T-V	4 open ports w/ valve	4A
AR-38NX4T-VF	4-tube w/ valve + fittings, 3 plugs	4A
5-Tube Caps		
AR-38NX5T	5 open ports	5A
AR-38NX5T-F	5-tube w/ fittings, 4 plugs	5A
Check Valve		
AR-CVX1	1-Way Check Valve, Inert PTFE	





1-tube w/ valve + fitting





AR-38NX2T 2 open ports



AR-38NX2T-F 2-tube w/fittings 1 plug



AR-38NX1T-V

1 open port w/ valve

AR-38NX2T-V 2 open ports w/ valve



AR-38NX2T-VF 2-tube w/ valve + fittings 1 plug



AR-38NX3T-VF 3-tube w/ valve + fittings 2 plugs



AR-38NX3T 3 open ports



AR-38NX3T-F 3-tube w/fittings 2 plugs



AR-38NX3T-V 3 open ports w/ valve





AR-38NX4T 4 open ports



AR-38NX4T-F 4-tube w/fittings 3 plugs



AR-38NX4T-V 4 open ports w/ valve



AR-38NX4T-VF 4-tube w/ valve + fittings 3 plugs



AR-38NX5T 5 open ports



AR-38NX5T-F 5-tube with fittings 4 plugs

# GL 45

For 45mm threaded glass bottles



## **Container Type and Thread Size**

Introduced by laboratory glassware manufacturers such as Duran<sup>®</sup> and Kontes<sup>®</sup>, the GL45-threaded borosilicate glass bottle ("GL" means "glass," and "45" is the diameter in mm) is a common sight in most labs and is the standard for containment and storage for pure and mixed reagents.

Solvent waste caps for GL45-threaded bottles are available in a low-profile 7-port manifold (size M), in both PP and PTFE. For larger diameter or additional ports, select from the "stacked" manifold options (size L and XL).

Type C Port x4 Type A Port x3 AR-45P7M 7-Port Size M Type D Port x4 AR-45P4L 4-Port Size L Type D Port x4 Type A Port x6 AR-45P10L 10-Port Size L Type D Port x6 Type E Port x1 AR-45P7XL

Waste Collection

7-Port Size XL

Part Number	Description	# of Ports
Manifolds for	GL 45	
AR-45P7M	7-Port, Size M, Polypropylene	3A, 4C
AR-45X7M	7-Port, Size M, PTFE	3A, 4C
AR-45P4L	4-Port, Size L, Polypropylene	4D
AR-45P10L	10-Port, Size L, Polypropylene	6A, 4D
AR-45P7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K45P-A	Waste Kit Basic	6A, 4D
AR-K45P-B	Waste Kit Plus	6A, 4D

44.3 mm - 45 mm





AR-K45P-A Basic Waste Kit

## The Basic Kit for HPLC waste

**Basic Kit Contents** 

collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

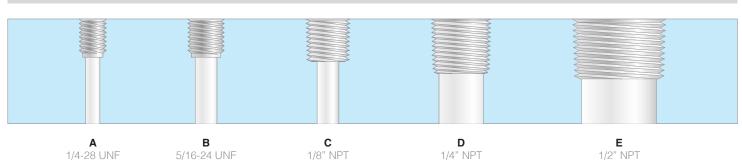
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



AR-K45P-B Plus Waste Kit



## GL 45

Solvent Extraction

## For 45mm threaded glass bottles



#### **Solvent Extraction**

Although practically all the bottle caps provided here could be used for either solvent extraction or waste collection, the difference in function lies in how ventilation is handled.

During solvent extraction, air must enter the bottle to displace solvent removed - a problem resolved with a oneway check valve. The removeable valve is constructed of inert PTFE components with stainless spring, compatible with most laboratory solvents, with a low opening pressure below 1psi to avoid pump cavitation.

Tubing is secured to threaded ports ("Type A" 1/4-28) in inert PTFE inserts. The insert rotates independently from the Polypropylene cap collar - a feature which prevents twisted tubing when the cap is removed. The tubing connections provided are for 1/8" (3.2mm) OD tubing.





## Available 2024

Part Number	Description	Tube Ports
1-Tube Caps		
AR-45X1T-V	1 open port w/ valve	1A
AR-45X1T-VF	1-tube w/ valve + fittings	1A
2-Tube Caps		
AR-45X2T	2 open ports	2A
AR-45X2T-F	2-tube w/ fittings, 1 plug	2A
AR-45X2T-V	2 open ports w/ valve	2A
AR-45X2T-VF	2-tube w/ valve + fittings, 1 plug	2A
3-Tube Caps		
AR-45X3T	3 open ports	ЗA
AR-45X3T-F	3-tube w/ fittings, 2 plugs	ЗA
AR-45X3T-V	3 open ports w/ valve	ЗA
AR-45X3T-VF	3-tube w/ valve + fittings, 2 plugs	ЗA
4-Tube Caps		
AR-45X4T	4 open ports	4A
AR-45X4T-F	4-tube w/ fittings, 3 plugs	4A
AR-45X4T-V	4 open ports w/ valve	4A
AR-45X4T-VF	4-tube w/ valve + fittings, 3 plugs	4A
5-Tube Caps		
AR-45X5T	5 open ports	5A
AR-45X5T-F	5-tube w/ fittings, 4 plugs	5A
Check Valve		
AR-CVX1	1-Way Check Valve, Inert PTFE	





AR-45X2T-VF 2-tube w/ valve + fittings 1 plug



AR-45X3T-VF 3-tube w/ valve + fittings 2 plugs



AR-45X4T-VF 4-tube w/ valve + fittings 3 plugs



AR-45X2T 2 open ports



AR-45X2T-F 2-tube w/fittings 1 plug



AR-45X1T-V

1 open port w/ valve

AR-45X2T-V 2 open ports w/ valve



AR-45X3T-V 3 open ports w/ valve



Tube

2

Tubes

3



AR-45X3T 3 open ports



AR-45X4T 4 open ports



AR-45X3T-F

2 plugs

3-tube w/fittings

AR-45X4T-F 4-tube w/fittings 3 plugs



AR-45X4T-V 4 open ports w/ valve







AR-45X5T 5 open ports



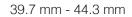
AR-45X5T-F 5-tube with fittings 4 plugs

## **DIN 45** For 45mm DIN-standard jerricans

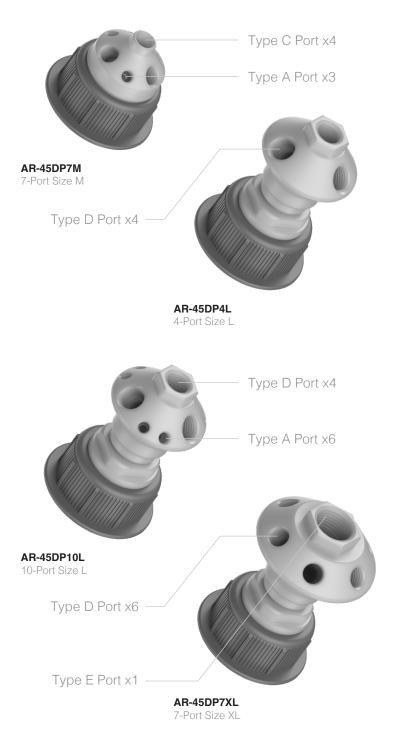
## **Container Type and Thread Size**

The DIN 45 thread, derived by the Deutsches Institute for Normung e.V. ("DIN") - the German Institute for Standardization), is a 45mm standardized thread more commonly found on jerricans and carboys in EU member states and Asia.

A quirk of the DIN 45 thread is that a GL45 cap will usually fit onto it, although the GL45 cap is usually too deep to seal properly. But by removing a bit of height from a GL45 cap, it's possible to use a GL45 on DIN45 - one advantage being the many color options available in GL45. However, the converse does not work: DIN45 won't typically fit a GL45 bottle.







Waste Collection

Part Number	Description	# of Ports
Manifolds for	DIN 45	
AR-45DP7M	7-Port, Size M, Polypropylene	3A, 4C
AR-45DX7M	7-Port, Size M, PTFE	3A, 4C
AR-45DP4L	4-Port, Size L, Polypropylene	4D
AR-45DP10L	10-Port, Size L, Polypropylene	6A, 4D
AR-45DP7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K45DP-A	Waste Kit Basic	6A, 4D
AR-K45DP-B	Waste Kit Plus	6A, 4D



**AR-K45DP-A** Basic Waste Kit

## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

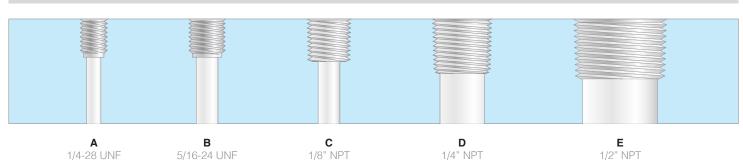
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K45DP-B** Plus Waste Kit



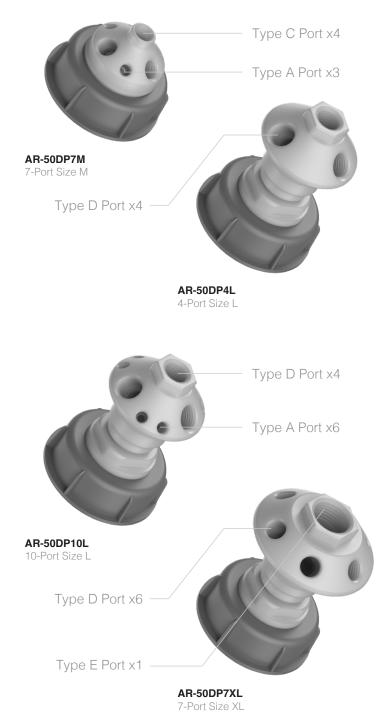
# DIN 50

For 50mm DIN-standard jerricans



## **Container Type and Thread Size**

The DIN 50 thread, derived by the Deutsches Institute for Normung e.V. ("DIN") - the German Institute for Standardization), is a 50mm standardized thread more commonly found on jerricans and carboys in EU member states and Asia.



Waste Collection

Part Number	Description	# of Ports
Manifolds for	DIN 50	
AR-50DP7M	7-Port, Size M, Polypropylene	3A, 4C
AR-50DX7M	7-Port, Size M, PTFE	3A, 4C
AR-50DP4L	4-Port, Size L, Polypropylene	4D
AR-50DP10L	10-Port, Size L, Polypropylene	6A, 4D
AR-50DP7XL	7-Port, Size XL, Polypropylene	6D, 1E
Waste Kits		
AR-K50DP-A	Waste Kit Basic	6A, 4D
AR-K50DP-B	Waste Kit Plus	6A, 4D

#### 49.3 mm - 50 mm





**AR-K50DP-A** Basic Waste Kit

## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

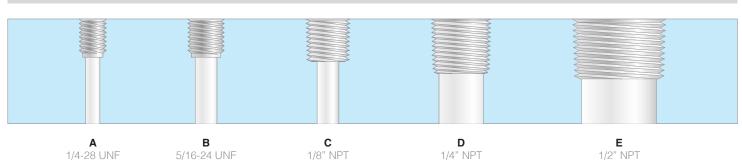
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K50DP-B** Plus Waste Kit



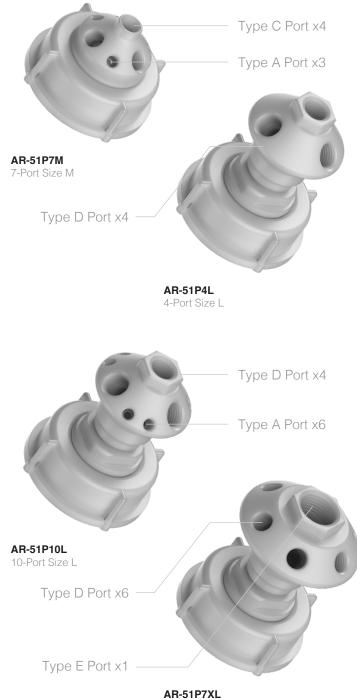
## 51 mm

For 51mm "tight-head" jerricans



## Container Type and Thread Size

A common thread found on many jerricans and "tighthead" blow-molded containers in North America. Many such containers are UN- or DOT-rated for the storage and transportation of hazardous materials.



Waste Collection

7-Port Size XL

Part Number	Description	# of Ports		
Manifolds for DIN 51MM				
AR-51P7M	7-Port, Size M, Polypropylene	3A, 4C		
AR-51X7M	7-Port, Size M, PTFE	3A, 4C		
AR-51P4L	4-Port, Size L, Polypropylene	4D		
AR-51P10L	10-Port, Size L, Polypropylene	6A, 4D		
AR-51P7XL	7-Port, Size XL, Polypropylene	6D, 1E		
Waste Kits				
AR-K51P-A	Waste Kit Basic	6A, 4D		
AR-K51P-B	Waste Kit Plus	6A, 4D		

49 mm - 51 mm





**AR-K51P-A** Basic Waste Kit

## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

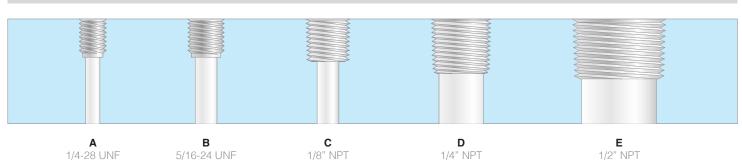
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K51P-B** Plus Waste Kit

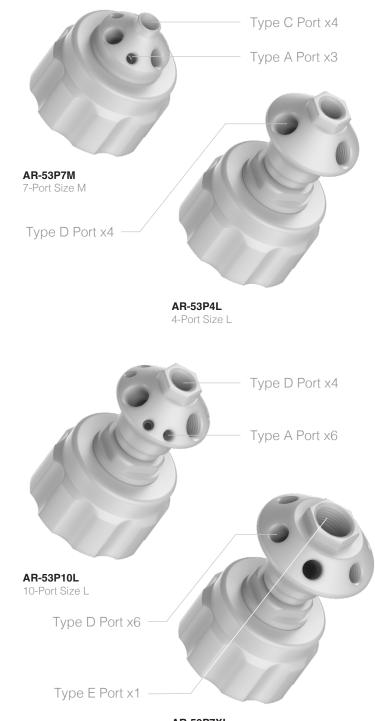


## **53B** For 53mm "buttress" threads



## **Container Type and Thread Size**

Integrated into many of the flagship storage containers made by Thermo-Fisher<sup>®</sup> Nalgene<sup>®</sup>, the 53B "buttress" thread has a heavy-duty thread finish - more robust than many ISO or DIN standard threads of similar dimension. For this reason, it is often found on narrow-mouth lab bottles due to its resilience during autoclaving.



Waste Collection

**AR-53P7XL** 7-Port Size XL

Part Number	Description	# of Ports		
Manifolds for 53B Nalgene				
AR-53P7M	7-Port, Size M, Polypropylene	3A, 4C		
AR-53X7M	7-Port, Size M, PTFE	3A, 4C		
AR-53P4L	4-Port, Size L, Polypropylene	4D		
AR-53P10L	10-Port, Size L, Polypropylene	6A, 4D		
AR-53P7XL	7-Port, Size XL, Polypropylene	6D, 1E		
Waste Kits				
AR-K53P-A	Waste Kit Basic	6A, 4D		
AR-K53P-B	Waste Kit Plus	6A, 4D		

53.5 mm - 54 mm





**AR-K53P-A** Basic Waste Kit

## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

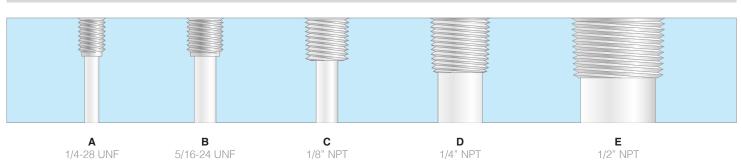
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



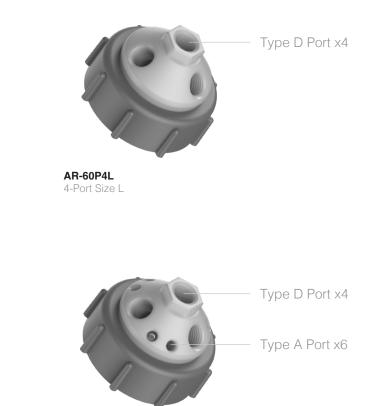
**AR-K53P-B** Plus Waste Kit



Waste Collection

## For 60mm DIN-standard jerricans

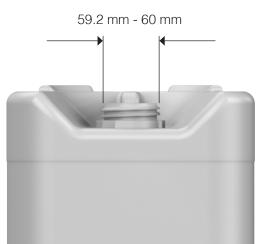
## Waste Collection



**AR-60P10L** 10-Port Size L

## Container Type and Thread Size

The DIN 60 thread, derived by the Deutsches Institute for Normung e.V. ("DIN") - the German Institute for Standardization), is a 60mm standardized thread more commonly found on jerricans and carboys in EU member states and Asia.



Part Number	Description	# of Ports	
Manifolds for DIN 60			
AR-60P4L	4-Port, Size L, Polypropylene	4D	
AR-60P10L	10-Port, Size L, Polypropylene	6A, 4D	
Waste Kits			
AR-K60P-A	Waste Kit Basic	6A, 4D	
AR-K60P-B	Waste Kit Plus	6A, 4D	





## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

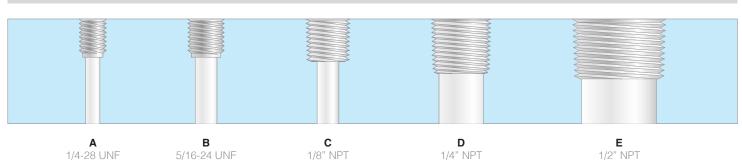
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K60P-B** Plus Waste Kit



## 61mm

For 61mm "tight-head" jerricans



#### Waste Collection

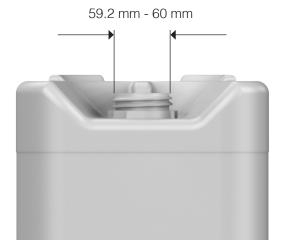


# Type D Port x4 Type A Port x6 AR-61P10L

**AR-61P10L** 10-Port Size L

## **Container Type and Thread Size**

A common thread found on many jerricans and "tighthead" blow-molded containers in North America. Many such containers are UN- or DOT-rated for the storage and transportation of hazardous materials.



Part Number	Description	# of Ports	
Manifolds for 61mm			
AR-61P4L	4-Port, Size L, Polypropylene	4D	
AR-61P10L	10-Port, Size L, Polypropylene	6A, 4D	
Waste Kits			
AR-K61P-A	Waste Kit Basic	6A, 4D	
AR-K61P-B	Waste Kit Plus	6A, 4D	





## **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

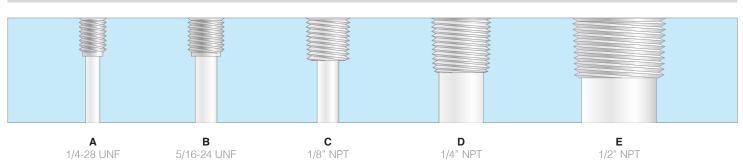
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

## Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K61P-B** Plus Waste Kit



## 63mm

For Rieke® and Nowpak® BIC





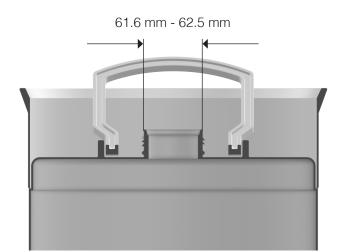
– Type A Port x6



## Container Type and Thread Size

There are a host of thread variants in the 63mm diameter, and unfortunately most are incompatible with the others. A more common version utilizes the Rieke<sup>®</sup> 63mm threaded cap (check along the rim of the closure of your 63mm container - often "Rieke<sup>®</sup>" will be embossed on the top). Interestingly, this identical thread was also integrated into the NowPak<sup>®</sup> Liner-Based System by Entegris<sup>®</sup>.

Note that the Nalgene<sup>®</sup> Lowboy 63mm container is a slightly different thread; inquire for solutions.



Part Number	Description	# of Ports	
Manifolds for 63mm Rieke / Nowpak			
AR-63P4L	4-Port, Size L, Polypropylene	4D	
AR-63P10L	10-Port, Size L, Polypropylene	6A, 4D	
Waste Kits			
AR-K63P-A	Waste Kit Basic	6A, 4D	
AR-K63P-B	Waste Kit Plus	6A, 4D	



**AR-K63P-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

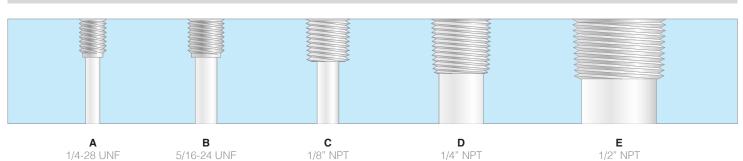
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

#### **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.

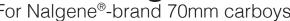


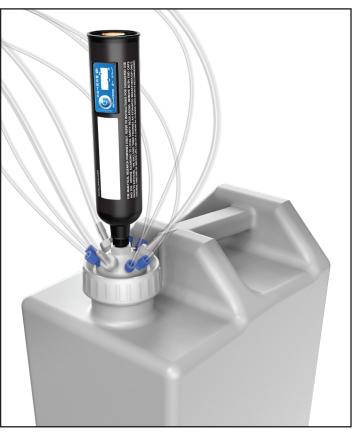
**AR-K63P-B** Plus Waste Kit



## **70mm Nalgene®** For Nalgene®-brand 70mm carboys

Waste Collection







AR-70NP4L 4-Port Size L

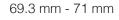


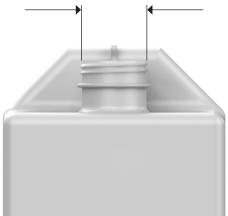
Type D Port x4

AR-70NP10L 10-Port Size L

#### **Container Type and Thread Size**

Nalgene manufactures a heavy-duty rectangular carboy version with a 70mm buttress thread. This same thread is also found on Nalgene®-brand plastic mason jars, where the neck is intended to fit various blenders such as Osterizer<sup>™</sup>, as well as other fixtures and closures with Mason jar threads.





Part Number	Description	# of Ports
Manifolds for 70mm Nalgene		
AR-70NP4L	4-Port, Size L, Polypropylene	4D
AR-70NP10L	10-Port, Size L, Polypropylene	6A, 4D
Waste Kits		
AR-K70NP-A	Waste Kit Basic	6A, 4D
AR-K70NP-B	Waste Kit Plus	6A, 4D





#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

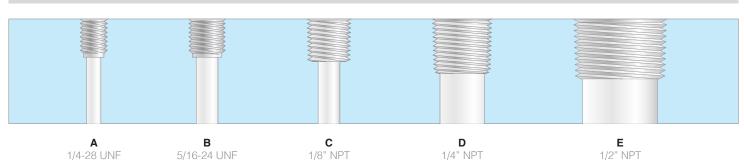
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

#### Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K70NP-B** Plus Waste Kit



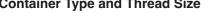
## 70mm Rieke®

For 6TPI and 8TPI Rieke<sup>®</sup> threads



#### **Container Type and Thread Size**

Often preferred in laboratories due to their adherence to UN/DOT standards, these "tighthead" containers with a Rieke<sup>®</sup> 70mm threaded cap are supplied in two different thread variants: a 6TPI and an 8TPI (where TPI stands for "threads per inch"). In some areas, local regulations allow these containers to be shipped directly from the lab to incineration facilities - which can be a significant benefit of using a DOT-type container. Telling the difference between a 6TPI and an 8TPI thread canbe tricky. But many Rieke® caps include the TPI number embossed along the rim of the cap. If not, verify with your container supplier or request a sample cap to test fitment.





69.3 mm - 71 mm





AR-70P4L / 70AP4L 4-Port Size L, 8TPI / 6TPI Type D Port x4

Waste Collection

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.



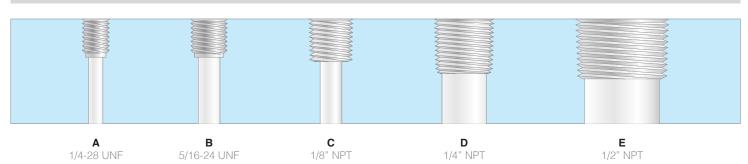
**AR-K70P-A / AR-K70AP-A** Basic Waste Kit 8TPI / 6TPI



#### **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.

AR-K70P-B / AR-K70AP-B Plus Waste Kit 8TPI / 6TPI



### GL 80

#### For wide-mouth 80mm glass bottles



#### **Container Type and Thread Size**

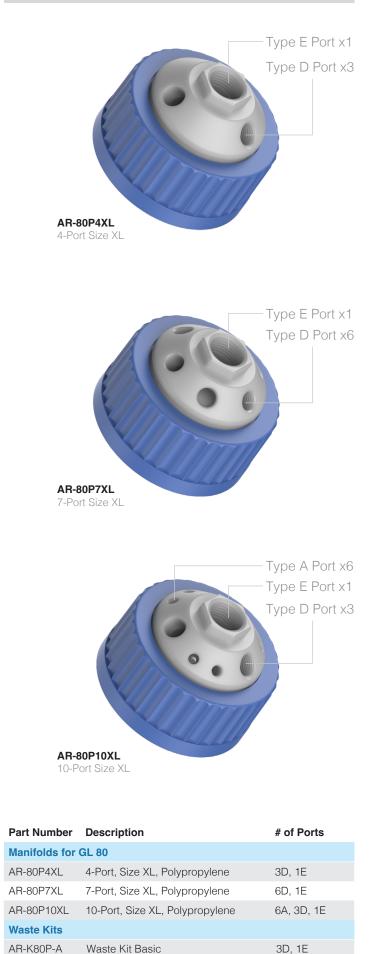
Sometimes you just need a bottle with a bigger mouth. For those instances, there's the GL80. Offered by such brands as Duran<sup>®</sup> and Kimble<sup>®</sup>, the GL80 (or GLS80) is useful for its robust thread on thick-walled borosilicate glass bottles.

Waste Collection

AR-K80P-B

Waste Kit Plus

6A, 3D, 1E



79 mm - 80 mm





**AR-K80P-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

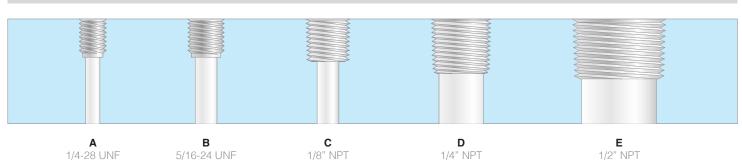
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

#### Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K80P-B** Plus Waste Kit



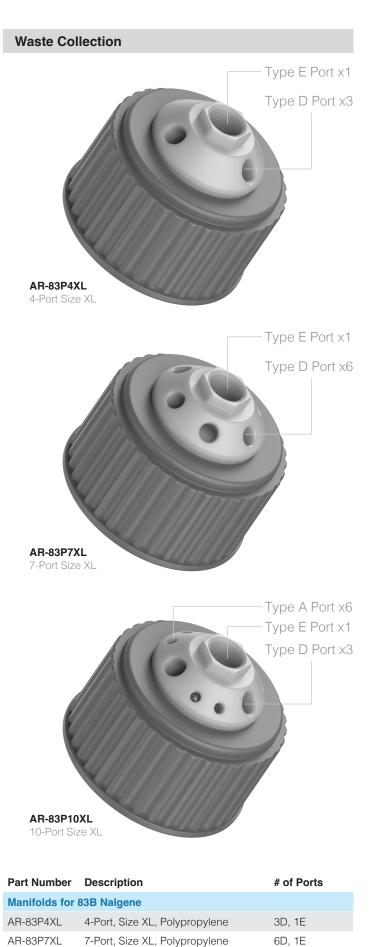
### **83B** For 83mm "buttress" threads



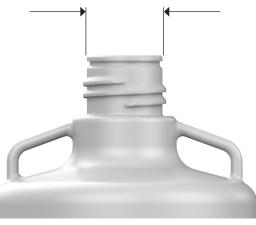
#### **Container Type and Thread Size**

Integrated into many of the flagship storage containers made by Thermo-Fisher<sup>®</sup> Nalgene<sup>®</sup>, the 83B "buttress" thread has a heavy-duty thread finish -- more robust than many ISO or DIN standard threads of similar dimension. For this reason, it is often found on narrow-mouth lab bottles due to its resilience during autoclaving.

The 83B caps provided here will also fit Foxx<sup>®</sup> and Kautex<sup>®</sup> brands of the same thread type.



88.3 mm - 89.2 mm



AR-83P10XL

Waste Kits AR-K83P-A

AR-K83P-B

10-Port, Size XL, Polypropylene

Waste Kit Basic

Waste Kit Plus

6A, 3D, 1E

6A, 3D, 1E

3D, 1E



**AR-K83P-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

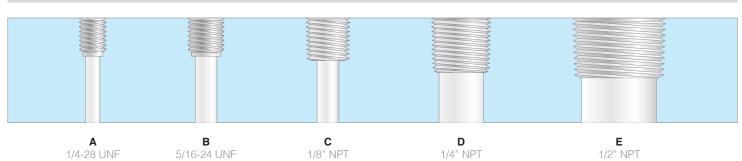
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings



The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-K83P-B** Plus Waste Kit



## 100mm

Waste Collection

For 100-415 Nalgene® threads



#### **Container Type and Thread Size**

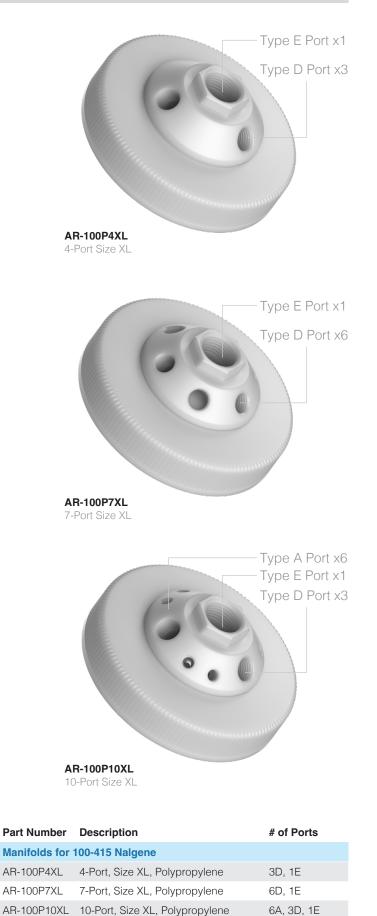
The widest common thread type in the Nalgene<sup>®</sup> brand, 100mm (or 100-415) threaded containers are found on both large carboys and small plastic storage containers.

**Waste Collection** 

Waste Kits AR-K100P-A

AR-K100P-B

Waste Kit Basic Waste Kit Plus



3D, 1E

6A, 3D, 1E





**AR-K100P-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

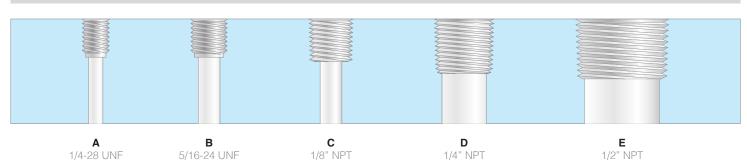
- (6) PTFE Type A port plugs
- (3) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings



#### **Plus Kit Contents**

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.

**AR-K100P-B** Plus Waste Kit



### **Justrite® Container**

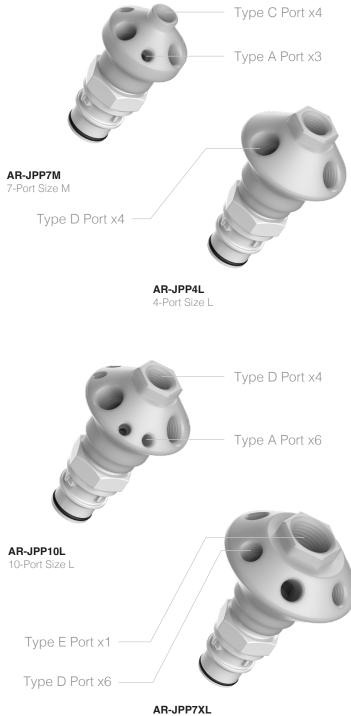
Waste Collection

With plastic quick disconnects

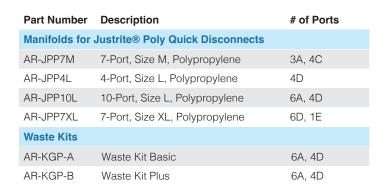


#### **Container Type and Quick Disconnect**

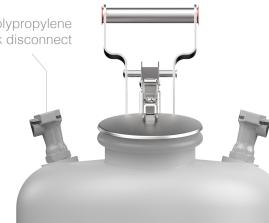
The deluxe option of solvent waste collection, Justrite® Centura<sup>™</sup> safety cans offer a range of features which set them apart from other containers typically used for effluents. With a spring-loaded and pressure-relieving lid, spark arrester, groundable pouring spout, and shutoff quick disconnects, these containers make waste collection a relatively clean and easy process. The pour spout can be locked in open position when emptying the contents, and because the quick disconnects include shutoff valves, it's easy to disengage waste manifolds (and exhaust filters) when switching out full containers with empty.



7-Port Size XL



Polypropylene quick disconnect





**AR-KGP-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

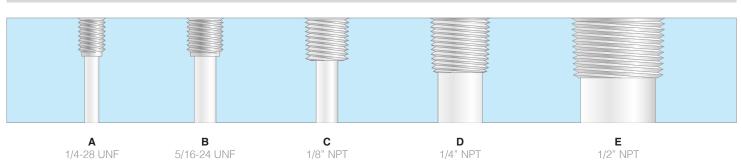
- (6) PTFE Type A port plugs
- (4) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

#### Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-KGP-B** Plus Waste Kit



### **Justrite® Container**

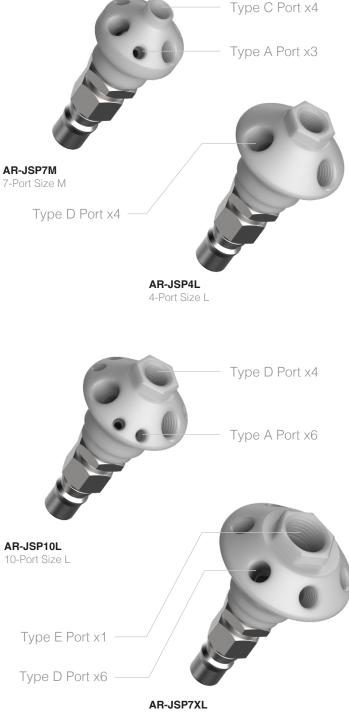
Waste Collection

With stainless steel quick disconnects



#### **Container Type and Quick Disconnect**

The deluxe option of solvent waste collection, Justrite® Centura<sup>™</sup> safety cans offer a range of features which set them apart from other containers typically used for effluents. With a spring-loaded and pressure-relieving lid, spark arrester, groundable pouring spout, and shutoff quick disconnects, these containers make waste collection a relatively clean and easy process. The pour spout can be locked in open position when emptying the contents, and because the quick disconnects include shutoff valves, it's easy to disengage waste manifolds (and exhaust filters) when switching out full containers with empty.



7-Port Size XL

Part Number	Description	# of Ports	
Manifolds for Container			
AR-JSP7M	7-Port, Size M, Polypropylene	3A, 4C	
AR-JSX7M	10-Port, Size M, PTFE	3A, 4C	
AR-JSP4L	4-Port, Size L, Polypropylene	4D	
AR-JSP10L	10-Port, Size L, Polypropylene	6A, 4D	
AR-JSP7XL	7-Port, Size XL, Polypropylene	6D, 1E	
Waste Kits			
AR-KJS-A	Waste Kit Basic	6A, 4D	
AR-KJS-B	Waste Kit Plus	6A, 4D	

quick disconnect





**AR-KJS-A** Basic Waste Kit

#### **Basic Kit Contents**

The Basic Kit for HPLC waste collection includes a 10-port Polypropylene manifold, fittings kit with tubing connections for typical analytical-scale HPLC instruments, port plugs, filter adapter (straight and 90 degree elbow) and an exhaust filter with timer.

The fittings kit includes:

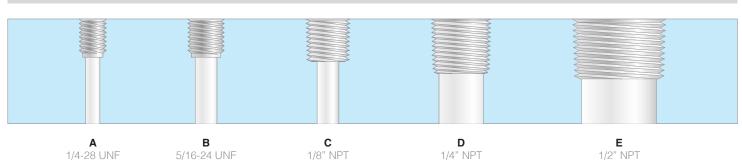
- (6) PTFE Type A port plugs
- (4) PP Type D port plugs
- (1) Barbed 1/4" Y-connector
- (1) 3/8" ID barbed adapter
- (3) 1/4" ID barbed adapters
- (1) 3/16" ID barbed adapter
- (1) 1/8" ID barbed adapter
- (2) 1/16" OD tube fittings
- (2) 2.2mm OD tube fittings
- (1) 2.5mm OD tube fitting
- (3) 1/8" OD tube fittings

#### Plus Kit Contents

The Plus Kit includes all the essentials of the Basic Kit for HPLC waste collection, but with the addition of a 5' tubing extension for detector outlets or short effluent tubes, plus a chemical-change indicator for real-time end of service life with organic solvents.



**AR-KJS-B** Plus Waste Kit



## **Container Types** A closer look at container threads

and dimensions, at 1:1 scale



38-400 shallow thread (Wako / Cubitainer) Scale 1:1

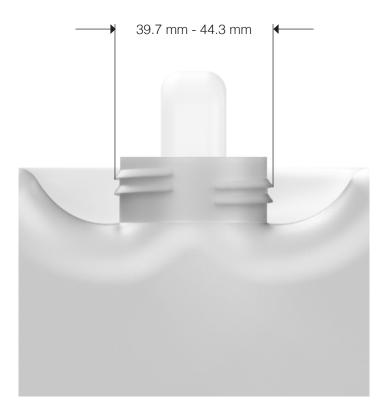


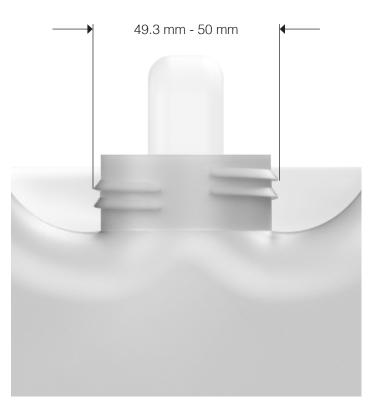
**GL38** Scale 1:1



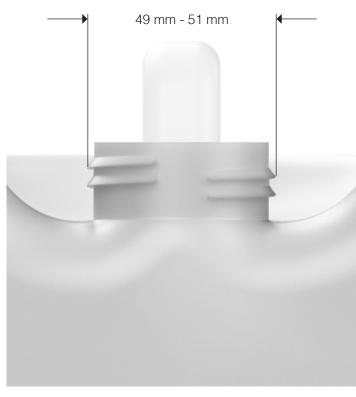


GL45 Scale 1:1

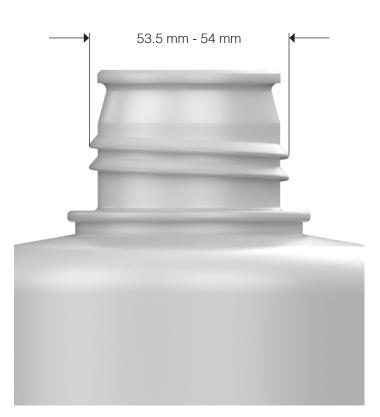








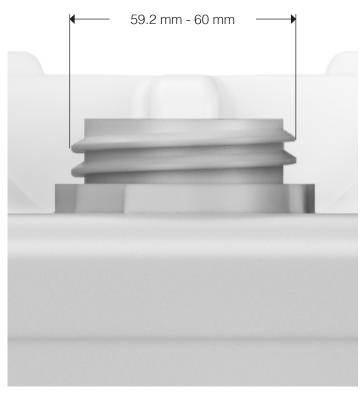
**DIN50** Scale 1:1

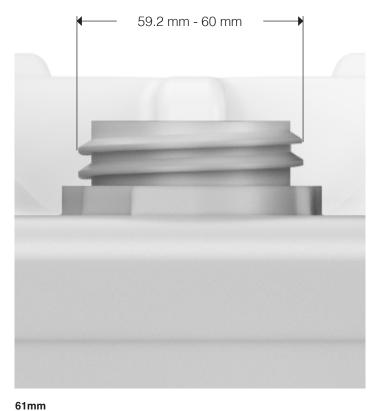


**53B** Scale 1:1

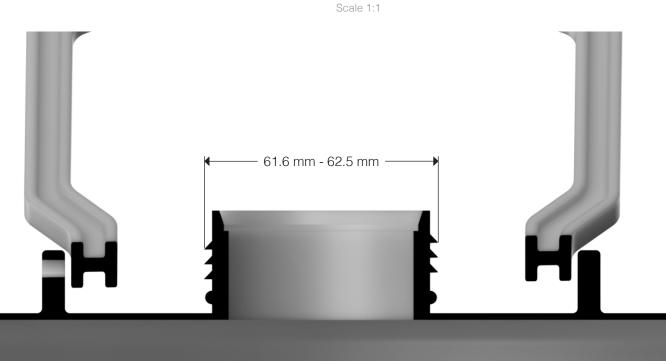
## **Container Types** A closer look at container threads

and dimensions, at 1:1 scale

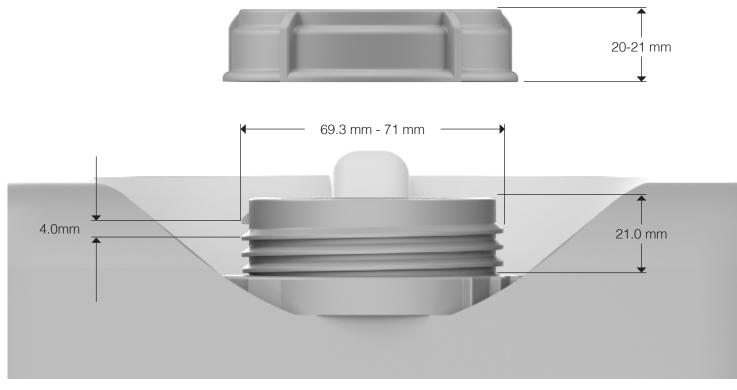




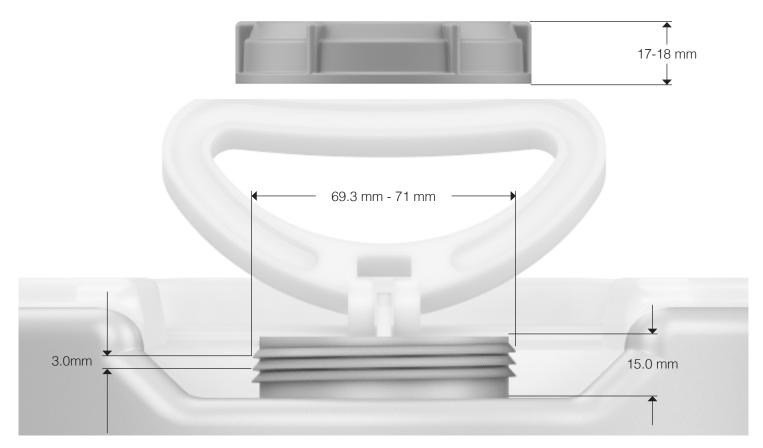
DIN60 Scale 1:1



63mm Scale 1:1

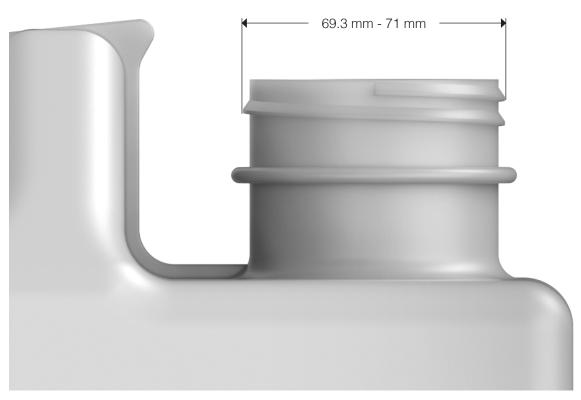






## **Container Types** A closer look at container threads

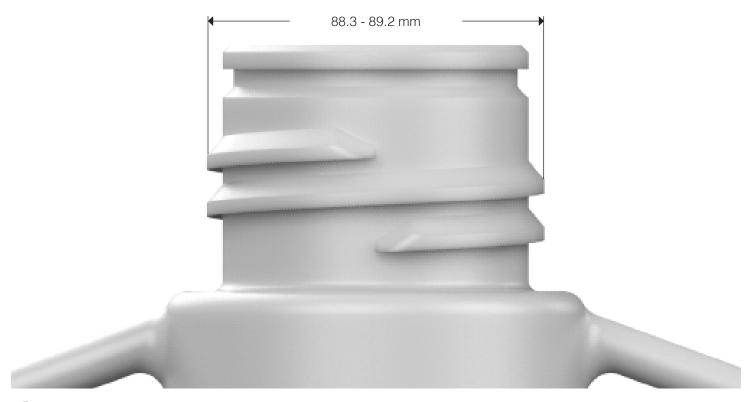
and dimensions, at 1:1 scale



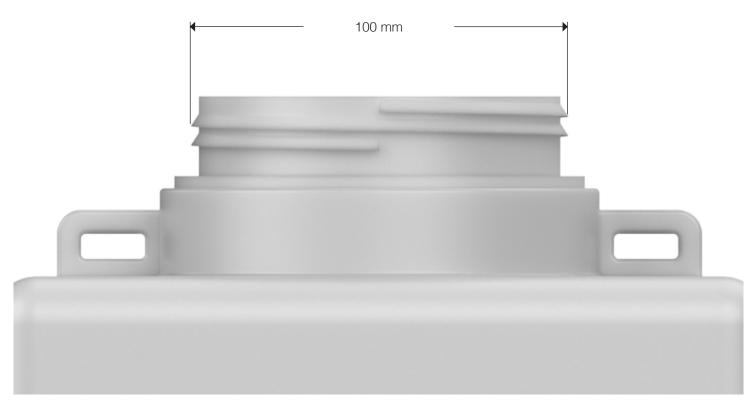
**70mm Nalgene** Scale 1:1



6

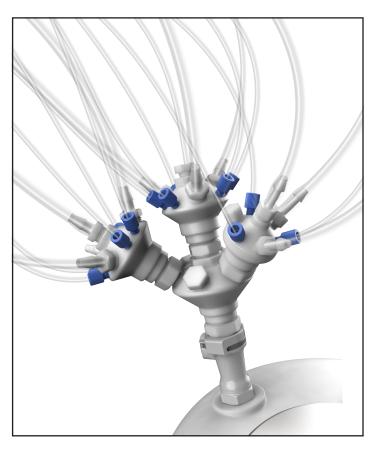


**83B** Scale 1:1



## **Stacking Manifolds**

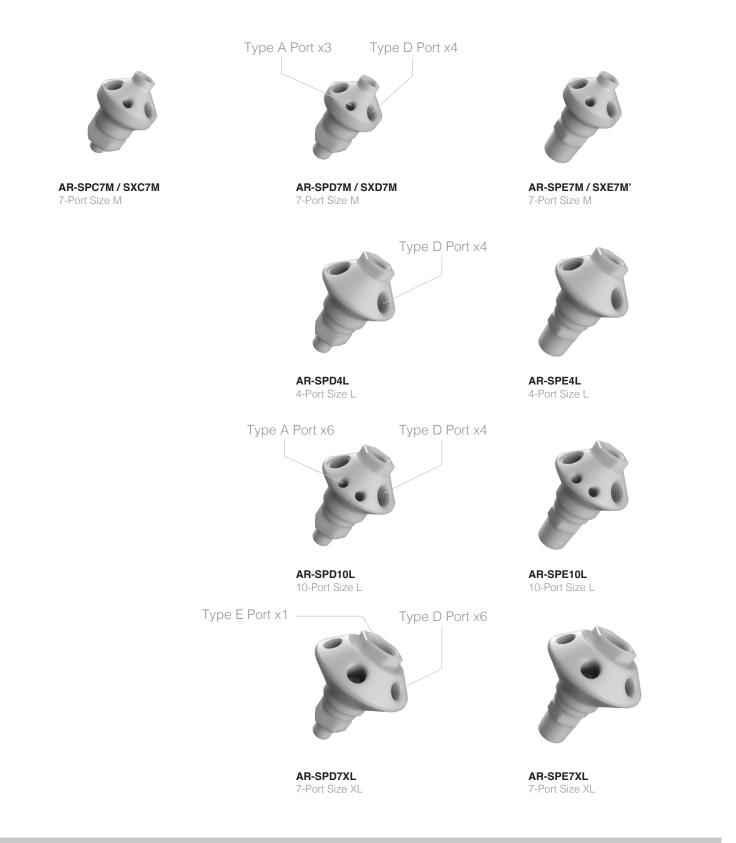
Expansion units for extra tubes

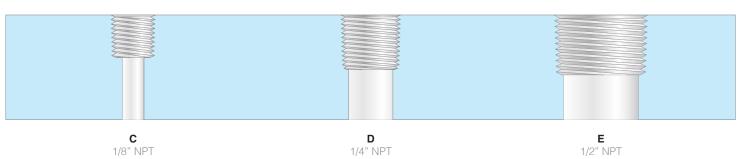


#### (Nearly) limitless modular expansion

One of the unique features of our solvent collection manifolds is their ability to adapt to additional tubing requirements. Whether attaching five tubes or fifty, each manifold can be expanded to fit the need by connecting modular "stacking" units. With tapered self-sealing NPT common threads, select the manifold which allows your system to accommodate the needs of your lab. This is especially useful in laboratories which are already at the maximum solvent capacity permissible by law. By connecting more than one instrument to a single waste container, additional containers may not be required.

Part Number	Description	# of Ports	
Stacking Mani	folds for Type C ports - 1/8" NPT		
AR-SPC7M	7-Port, Size M, Polypropylene	3A, 4D	
AR-SXC7M	7-Port, Size M, PTFE	3A, 4D	
Stacking Manifolds for Type D ports - 1/4" NPT			
AR-SPD7M	7-Port, Size M, Polypropylene	3A, 4D	
AR-SXD7M	7-Port, Size M, PTFE	3A, 4D	
AR-SPD4L	4-Port, Size L, Polypropylene	4D	
AR-SPD10L	10-Port, Size L, Polypropylene	6A, 4D	
AR-SPD7XL	7-Port, Size XL, Polypropylene	6D, 1E	
Stacking Manifolds for Type E ports - 1/2" NPT			
AR-SPE7M	7-Port, Size M, Polypropylene	3A, 4D	
AR-SXE7M	7-Port, Size M, PTFE	6A, 4D	
AR-SPE4L	4-Port, Size L, Polypropylene	4D	
AR-SPE10L	10-Port, Size L, Polypropylene	6A, 4D	
AR-SPE7XL	7-Port, Size XL, Polypropylene	6D, 1E	







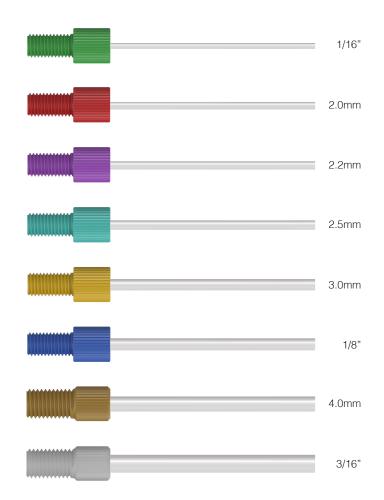
### **Compression Fittings**

Connections for hard-wall tubing

#### Tubing connections by OD and port type

The small-diameter tubing (typically less than 1/4" OD) used in many laboratory instruments for transporting solvents is often supplied in PTFE, ETFE, FEP, or similar fluoropolymer. Because the walls of the tubing are too hard for reliable connections with barbed fittings, these chemically-resistant plastics are connected to caps and manifolds by using compressing fittings. With a threaded fitting tightening onto a pliable ferrule, the OD of the tubing is compressed, forming a seal against the bottom of the threaded port.

Offered here in chemically-resistant Polypropylene, the various colors conform to the OD of each tubing size.



Part Number De	escription	U/M	Material
Type A – 1/4-28 U	NF		
AR-CPA16-10PK	1/16" OD Tubing	10/PK	PP
AR-CPA20 -10PK	2.0mm OD Tubing	10/PK	PP
AR-CPA22 -10PK	2.2mm OD Tubing	10/PK	PP
AR-CPA25 -10PK	2.5mm OD Tubing	10/PK	PP
AR-CPA30 -10PK	3.0mm OD Tubing	10/PK	PP
AR-CPA32 -10PK	1/8" OD Tubing	10/PK	PP
Type B – 5/16-24	JNF		
AR-CKB40	4.0mm OD Tubing	Each	PEEK/ETFE
AR-CKB47	3/16" OD Tubing	Each	Acetal/ETFE
Type C – 1/8" NP1	г		
AR-CPC16	1/16" OD Tubing	Each	PP
AR-CPC20	2.0mm OD Tubing	Each	PP
AR-CPC22	2.2mm OD Tubing	Each	PP
AR-CPC25	2.5mm OD Tubing	Each	PP
AR-CPC30	3.0mm OD Tubing	Each	PP
AR-CPC32	1/8" OD Tubing	Each	PP
Type D – 1/4" NP1	г		
AR-CPD16	1/16" OD Tubing	Each	PP
AR-CPD20	2.0mm OD Tubing	Each	PP
AR-CPD22	2.2mm OD Tubing	Each	PP
AR-CPD25	2.5mm OD Tubing	Each	PP
AR-CPD30	3.0mm OD Tubing	Each	PP
AR-CPD32	1/8" OD Tubing	Each	PP



**AR-CPA16-10PK** 1/16" OD Tubing, 10/PK



AR-CPA20-10PK 2.0mm OD Tubing, 10/PK



AR-CPA22-10PK 2.2mm OD Tubing, 10/PK



AR-CPA25-10PK 2.5mm OD Tubing, 10/PK

AR-CKB40 4.0mm OD Tubing

AR-CKB47 3/16" OD Tubing



AR-CPA30-10PK 3.0mm OD Tubing, 10/PK



**AR-CPA32-10PK** 1/8" OD Tubing, 10/PK



AR-CPC16 1/16" OD Tubing



AR-CPC20 2.0mm OD Tubing



**AR-CPC22** 2.2mm OD Tubing



AR-CPC25 2.5mm OD Tubing



**AR-CPC30** 3.0mm OD Tubing



AR-CPC32 1/8" OD Tubing



AR-CPD16 1/16" OD Tubing



AR-CPD20 2.0mm OD Tubing



AR-CPD22 2.2mm OD Tubing



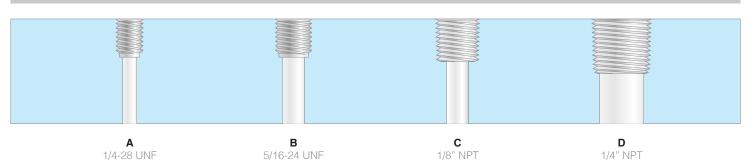
**AR-CPD25** 2.5mm OD Tubing



**AR-CPD30** 3.0mm OD Tubing



AR-CPD32 1/8" OD Tubing



## Barbed Fittings Connections for soft-wall tubing

#### Tubing connections by ID and port type

Often used for instrument waste plumbing where chemically-resistant tubing is not required, soft-material tubing like Tygon<sup>®</sup> or silicone is a convenient way to drain aqueous waste or buffers. These materials work well with barbed fittings. Supplied here in chemically resistant Polypropylene, they are available in packs of 10 fittings each.

1/16"
1/8"
3/16"
1/4"
3/8"
1/2"

Part Number De	scription		Material
Type C – 1/8" NPT			
AR-BPC16-10PK	1/16" ID Tubing	10/PK	PP
AR-BPC32-10PK	1/8" ID Tubing	10/PK	PP
AR-BPC47-10PK	3/16" ID Tubing	10/PK	PP
AR-BPC64-10PK	1/4" ID Tubing	10/PK	PP
AR-BPC95-10PK	3/8" ID Tubing	10/PK	PP
Type D – 1/4" NPT			
AR-BPD16-10PK	1/16" ID Tubing	10/PK	PP
AR-BPD32 -10PK	1/8" ID Tubing	10/PK	PP
AR-BPD47-10PK	3/16" ID Tubing	10/PK	PP
AR-BPD64-10PK	1/4" ID Tubing	10/PK	PP
AR-BPD95-10PK	3/8" ID Tubing	10/PK	PP
AR-BPD127-10PK	1/2" ID Tubing	10/PK	PP



**AR-BPC16-10PK** 1/8" NPT x 1/16" ID Tubing,10/PK



**AR-BPC32-10PK** 1/8" NPT x 1/8" ID Tubing,10/PK



**AR-BPC47-10PK** 1/8" NPT x 3/16" ID Tubing,10/PK



**AR-BPC64-10PK** 1/8" NPT x 1/4" ID Tubing,10/PK



**AR-BPC95-10PK** 1/8" NPT x 3/8" ID Tubing,10/PK



**AR-BPD16-10PK** 1/4" NPT x 1/16" ID Tubing,10/PK



**AR-BPD32-10PK** 1/4" NPT x 1/8" ID Tubing,10/PK



**AR-BPD47-10PK** 1/4" NPT x 3/16" ID Tubing,10/PK



**AR-BPD64-10PK** 1/4" NPT x 1/4" ID Tubing,10/PK



**AR-BPD95-10PK** 1/4" NPT x 3/8" ID Tubing,10/PK



**AR-BPD127-10PK** 1/4" NPT x 1/2" ID Tubing,10/PK



## **Plugs and Extras** Fittings kits, tubing extensions, adapters, plugs, and Y-fittings

#### All the miscellaneous things

When you're plumbing an HPLC system, it's surprising how often you need something extra. Look here when you need a spare or when you're trying to attach this to that. Let us know if you don't find what you're searching for.



**AR-FK1** Fittings kit



AR-TX5

Tubing extension, 5'

Part Number	Description	Material	
Type A – 1/4-2	8 UNF		
AR-PXA	Plug for 1/4-28 Ports	PTFE	
Type B - 5/16-	-24 UNF		
AR-PXB	Plug for 1/4-28 Ports	PTFE	
Type C – 1/8"	NPT		
AR-PPC	Plug for 1/8" NPT Ports	PP	
AR-APAC	Adapter, Type A x Type C, MNPT	PP	
AR-APBC	Adapter, Type B x Type C, MNPT	PP	
<b>Type D – 1/4</b> "	NPT		
AR-PPD	Plug for 1/4" NPT Ports	PP	
AR-APAD	Adapter, Type A x Type D, MNPT	PP	
AR-APBD	Adapter, Type B x Type D, MNPT	PP	
Type E – 1/2"	NPT		
AR-PPE	Plug for 1/2" NPT Ports	PP	
AR-APDE	Adapter, Type D x Type E, MNPT	PP	
Barbed Y Fitti	ngs		
AR-YP16	1/16" ID tubing	PP	
AR-YP32	1/8" ID tubing	PP	
AR-YP64	1/4" ID tubing	PP	
AR-YP95	3/8" ID tubing	PP	
Fittings Kit			
AR-FK1	Fittings kit	PTFE/PP	
Tubing Extension			
AR-TX5	Tubing extension, 5'	PTFE/PP	
AR-TX5-4PK	4-Pack tubing extension	PTFE/PP	
Bottle Thread Adapters			
AR-AP45-38	Thread adapter, GL45 X 38-430	PP	
AR-AP45-40	Thread adapter, GL45 X S40	PP	



#### **Barrbed Y Fittings**



AR-YP16

Y Fitting 1/16"



AR-YP32 Y Fitting 1/8"



AR-YP64 Y Fitting 1/4"



AR-YP95 Y Fitting 3/8"

#### **Plugs and Adapters**



AR-APBC Adapter Туре В х Type C



AR-APAC Adapter Type A x Type C



AR-APBD Adapter Туре В х Type D



AR-APAD Adapter Type A x Type D



**AR-APDE** Adapter Type D x Type E



AR-PXA Plug for Type A Ports



AR-PXB Plug for Type B Ports

в

AR-PPC Plug for Type C Ports

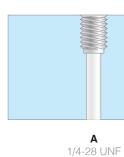


AR-PPD Plug for Type D Ports



AR-PPE Plug for Type E Ports

#### **Port Thread Sizes**



5/16-24 UNF

С 1/8" NPT

D 1/4" NPT

Е

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