

Chemicals

# High volume solvent and blends delivery systems

The safe & sustainable option for your laboratory  
FisherPak™ | BasicPak | NOWPak II

# High volume solvent and blends delivery systems

## The safe and sustainable chemical handling option for your workplace

Fisher Scientific offers the following systems for your high volume solvent and blend needs.

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## High volume solvent/chemical blend delivery systems offer a safe and sustainable approach for virtually unlimited applications. Providing the choice you need - and improving productivity within your workplace.

If you are routinely using more than 4 L of solvents and blends, then it might be time to learn more about our high-volume solvent/chemical blend delivery services. This service offers you solvents and blends in returnable stainless steel barrels/drums/containers which are a practical choice for handling larger quantities of high purity solvents and blends.



### PERFORMANCE & PRODUCTIVITY

**Broad range of high-quality chemicals to support the laboratory, pilot plant and production environment.**

- We offer a wide variety of drum/container sizes, product grades (whether you need extra dry grade, ACS grade, HPLC grade, USP grade,...), pure chemical or blends to meet your exact requirements.
- Test once! One batch, one test...
- We provide the chemicals/blends in inert packaging, so that there is no risk of the packaging interacting/reacting with the chemicals inside the container. The packaging also helps the chemicals and blends to be protected from external environmental factors (such as moisture and vapors). This ensures that solvents and blends with low water content stay that way!



### SUPPLY & SUPPORT

**Mitigate supply risk to your business with our value-add elements of our service.**

- As chemical shortages have a direct impact to your business, customers choose to reduce risk by opting for dual sourcing: with partners that can offer the service and quality they need to meet their business needs. We have a plentiful supply of chemicals and containers – and have a dedicated fleet to support our custom and bulk services available for you.
- Our returnable drums/barrels//tote service is a configurable program – with accessories and services to support your unique needs.
- When using the returnable drums and containers service, a dedicated Thermo Fisher Scientific business partner is assigned to support your business requirements. They help to manage the service, and are there to provide any technical, logistical and/or financial questions.



### SAFETY & RELIABILITY

**Supporting a positive health and safety working environment.**

- Reduce the risk of solvent/chemical spillage: our containers are available for use with various accessories to ensure you can get the product out safely and reliably. Or simply attach the container directly into point of use.
- As our containers are made from either metal or plastic, there is no risk of broken glass in the workplace.
- The unique design of our drums/containers reduce the risk of flammable or toxic solvent liquids and vapors being readily released into the surrounding air.



### SUSTAINABILITY

**Help meet corporate sustainability goals.**

- Reduce the amount of glass and cardboard that needs to be disposed of by utilizing the drum/barrel service in place of standard glass bottles. Almost 200 lbs./90 kgs of glass and cardboard are eliminated by each 200 L returnable drum/container system.
- Less freight miles calculated per liter of chemical: the drums/container freight miles are less when compared to glass bottles and cardboard packaging.
- Empty drums/barrels are cleaned, maintained, and refilled by Thermo Fisher Scientific – reducing your hazardous disposal costs, and reducing the rinsing step at your site, allowing you to be greener, and saving you time and money.

# FisherPak

## The FisherPak high volume solvent delivery system is the ideal choice for handling large quantities of high-purity solvents.

From lab to production scale, the FisherPak solution delivers solvents and chemical blends, to customers who needs to work with large volumes, in a safe, usable, and sustainable way. The FisherPak is a refillable dispensing system that protects product integrity purity, by utilising reusable Type 316 stainless-steel containers. The containers are pressurized with an inert gas, so the system remains closed, and the product maintains its purity.

### Key features

- Custom solvents blended and/or tested to your specific requirements
- Customizable to your needs with our extensive list of accessories
- ASME approved containers available for operating pressures over 15 psi
- Integrated fork channels are available for larger sizes

Available Sizes: 19 L, 28 L, 50 L, 200 L, 1350 L

### Protecting purity integrity and performance

FisherPak solvent and blends delivery system protects the purity and performance throughout the product life cycle (including shipment, delivery, installation and dispensing), by ensuring:

- It comes with a cleaned and pressure tested Type 316 stainless-steel container with a tamper-evident closure.
- A closed system is maintained to eliminate solvent/blend contamination during dispensing. It is also delivered with a LDPE (low density polyethylene) sleeve to maintain dust free connection.

### Enhancing safety

**Work in a healthier environment:** A unique combination of mechanical and manual controls protects exposure to vapors.

**Reduce chemical spillages:** the bottle-free, closed system eliminates the possibility of glass breakage and chemical leakage. A secondary auto shut-off valves can be incorporated into the quick connect hardware to also help eliminate possibility of spills.

**Get it right first time:** color-coded connectors are available to help prevent improper hookups.

**Meets safety standards:** Meets Department of Transportation and National Fire Protection Association (NFPA) 30 standards. The FisherPak come with a unique horizontal vapor venting, with an additional secondary safety feature for pressure relief incorporated into the FPakgasket prevents pressure build up beyond 15 psi.

### Improving productivity

- Reducing solvent testing
- Eliminating bottle rinsing
- Cutting disposal costs

### Promoting sustainable practices

- A reusable 200L FisherPak container replaces 50 four liter bottles and packing material
- Flammable or toxic solvent liquids and vapors are not released into the surrounding air

Type 316 stainless steel, also known as surgical grade steel, better resists common forms of corrosion compared to type 304 stainless steel used in other returnable drums

Internal electropolishing decreases any micro-trace levels of solvent -steel interaction

External electropolishing enhances the corrosion resistance



FisherPak horizontal venting system recognized by National Fire Protection Association (NFPA) as a safer alternative to solvent dispensing systems with vertical venting configurations.

# Specifications

## FisherPak Dimensions

Size	Height (Tap to Sump)	Height (Overall)	Diameter (Outer)	Tare Wt. (approx. kg)	Overflow Capacity
19 L	15.7"	22.2"	11.10"	10.8	20.0 L
50 L	27.8"	28.8"	16.00"	19.5	56.0 L
200 L	39.8"	47.0"	21.80"	41.6*	208.0 L
1350 L***	68.9"	71.7"	47.24"***	360.0	1441.0 L

\* Weights of 200 L and 115 L drums with ID numbers above 800 will be higher. (200 L = 45.7kg)

\*\* Footprint of the 1350 L is 47" x 47". Diameter of the IBC is less than the base width.

\*\*\*The 1350 L intermediate bulk containers (IBC) is made from high-grade Type 304 stainless steel and internally electropolished.




## Fork channel dimensions

<b>Left</b> (front to back)	24"
<b>Width</b> (left to right)	22.375"
<b>Height</b>	4"
<b>Weight</b>	77 lb. (35kg)


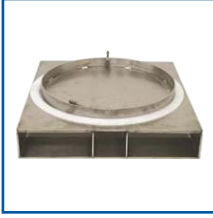







## FisherPak Accessories

The FisherPak high volume solvent delivery system offers an array of accessories to fit your individual needs.

Image	Part number	Accessory and description
	FPAKSOLVKIT	<b>FisherPak solvent dispensing kit</b> Consists of three components: QTM4 compression fitting, braided hose and a grounding clip. Used with all FisherPaks except 19 L size, which requires FP19SOLVKIT.
	FP19SOLVKIT	<b>FisherPak solvent dispensing kit for 19 L FisherPaks</b> Consists of three components: QTM2 compression fitting, braided hose and a grounding clip. Used ONLY with 19 L FisherPaks.
	FPAKGASKIT	<b>FisherPak gas delivery kit</b> Consists of four main components: QTM2 compression fitting, a cross piece, braided hose and a PFA tube. These components are used to connect your inert gas supply to the FisherPak to maintain a positive pressure, assist with product dispensing and help maintain product purity.

## FisherPak accessories continued

Image	Part number	Accessory and description
	14117V	<b>FisherPak safety autovalve</b> Safety dispensing valve that automatically shuts off to help eliminate the possibility of spills.
	14118HD	<b>FisherPak heavy-duty integrated forklift channels</b> Integrated forklift channels allow forklift equipment to move FisherPaks
	FL14117K	<b>Grounding clip with five feet of wire</b> A safety device used to ground the FisherPak
	FL14103N	<b>Level Cube, 3-Pin with 20 feet of cable</b> A device that, when coupled with the appropriate electronic level sensor, will provide a real-time, digital readout of the volume within the FisherPak.
	14103NX	<b>Level Cube, 5-Pin with low level alarm and 20 feet of cable</b> A device that, when coupled with the appropriate electronic level sensor, will provide a real-time, digital readout of the FisherPak volume and has a visible alarm to notify you of a low solvent level within the FisherPak.
	FL14103U	<b>Electronic level sensor, 3-Pin (50 L)</b> A device that, when coupled with the appropriate level cube, allows a real-time, digital readout of the volume within the FisherPak.
	14103V	<b>Electronic level sensor, 3-Pin (200 L)</b> A device that, when coupled with the appropriate level cube, allows a real-time, digital readout of the volume within the FisherPak.

## FisherPak accessories continued

Image	Part number	Accessory and description
	FL14103UX	<p><b>Electronic level sensor, 5-Pin (50 L)</b>            A device that, when coupled with the appropriate level cube, allows a real-time, digital readout of the volume within the FisherPak.</p>
	14103VX	<p><b>Electronic level sensor, 5-Pin (200 L)</b>            A device that, when coupled with the appropriate level cube, allows a real-time, digital readout of the volume within the FisherPak.</p>
	14117F	<p><b>PFA Tube 1/4" x 6'</b>            A component of the FisherPak gas delivery kit (PFA – Perfluoroalkoxy).</p>
	14117L	<p><b>TFE braided hose 1/4" x 5'</b>            A component of the FisherPak gas delivery kit (TFE) - Tetrafluoroethylene</p>
	14117M	<p><b>TFE braided hose 3/8" x 5'</b>            A component of the FisherPak solvent dispensing kit (TFE)</p>

**Note:** All connectors are swagelock compatible. Optional color-coded connections are available to prevent improper hookups.

Each FisherPak high volume solvent delivery system is configured to meet the unique requirements of the laboratory it serves. A Fisher Scientific representative will work with you to mutually determine the optimal container fleet size and accessories to assure your needs are met by establishing:

- Types of chemicals required
- Expected annual usage of each chemical
- Other site-specific requirements packing mat



## Commonly requested FisherPak solvents and their weights

The following is a list of commonly ordered FisherPak solvents and their weights. Contact your Fisher Scientific representative to ask about custom solvents and solutions.

### By gross fill weight

Chemical	Density	10 L		50 L		200 L		1350 L	
		LB	Kg	LB	Kg	LB	Kg	LB	Kg
2-Propanol	0.785	57.1	25.9	129.5	58.8	437.9	198.6	3,194.50	1,437.50
Methanol	0.792	57.4	26.0	130.2	59.1	440.7	199.9	3,173.00	1,427.90
Acetone	0.788	57.0	25.9	129.9	58.9	439.2	199.2	3,173.00	1,427.90
Alcohol	0.782	56.9	25.8	129.2	58.6	436.5	198.0	3,158.50	1,421.30
Acetonitrile	0.775	56.7	25.7	128.4	58.3	433.4	196.6	3,149.00	1,417.10
Chloroform	1.471	85.8	39.0	205.1	93.1	740.3	335.8	5,208.50	2,343.80
Methylene chloride	1.326	79.7	36.2	189.1	85.8	676.1	306.7	4,760.00	2,142.00
Ethyl acetate	0.902	62.0	28.1	142.4	64.6	489.4	222.0	3,500.00	1,575.00
Hexane	0.660	51.8	23.5	115.7	52.5	382.7	173.6	2,807.00	1,263.20
Iso-octane	0.692	53.2	24.1	119.3	54.1	396.8	180.0	2,879.00	1,295.60
Petroleum ether	0.630	50.6	23.0	112.4	51.0	369.5	167.6	2,600.00	1,170.00
Toluene	0.866	60.5	27.5	138.4	62.8	473.5	214.8	3,381.40	1,521.60
THF	0.889	61.4	27.9	141.0	64.0	483.8	219.4	3,467.00	1,560.20
Water	1.000	66.1	30.0	153.2	69.5	532.6	241.6	3,800.00	1,710.00

### By net weight

Chemical	Density	10 L		50 L		200 L		1350 L	
		LB	Kg	LB	Kg	LB	Kg	LB	Kg
2-Propanol	0.785	32.9	14.9	86.5	39.3	346.1	157.0	3,194.50	1,437.50
Methanol	0.792	33.2	15.0	87.2	39.6	349.0	158.3	3,173.00	1,427.90
Acetone	0.788	32.8	14.9	86.9	39.4	347.4	157.6	3,173.00	1,427.90
Alcohol	0.782	32.7	14.8	86.2	39.1	344.8	156.4	3,158.50	1,421.30
Acetonitrile	0.775	32.5	14.7	85.4	38.8	341.7	155.0	3,149.00	1,417.10
Chloroform	1.471	61.6	28.0	162.1	73.6	648.6	294.2	5,208.50	2,343.80
Methylene chloride	1.326	55.5	25.2	146.1	66.3	584.4	265.1	4,760.00	2,142.00
Ethyl acetate	0.902	37.8	17.1	99.4	45.1	397.7	180.4	3,500.00	1,575.00
Hexane	0.660	27.6	12.5	72.8	33.0	291.0	132.0	2,807.00	1,263.20
Iso-octane	0.692	29.0	13.1	76.3	34.6	305.1	138.4	2,879.00	1,295.60
Petroleum ether	0.630	26.4	12.0	69.4	31.5	277.8	126.0	2,600.00	1,170.00
Toluene	0.866	36.3	16.5	95.5	43.3	381.8	173.2	3,381.40	1,521.60
THF	0.889	37.2	16.9	98.0	44.5	392.1	177.8	3,467.00	1,560.20
Water	1.000	41.9	19.0	110.2	50.0	440.9	200.0	3,800.00	1,710.00



# BasicPak

The Fisher Chemical BasicPak is a returnable, reusable drum made from high-grade 304 stainless steel. This system is designed to deliver inert gas safely to the drum with 15 ps without contamination.

## Key features

- Equipped with Micro Matic coupling technology - the same easy-to-use technology that is frequently used for beverage dispensing solutions
- Safety pin on dust cap provides tamper evidence
- Heavy-duty fork channels made of Type 316 stainless steel are available

Available Sizes: 19 L, 50 L, 200 L

## Accessories

Part No.	Product Name	Included In Kit
BASESOLVKIT	Basic Solvent Dispensing Kit	<ul style="list-style-type: none"><li>• Adapter 1/4" M x 1/4" SW</li><li>• Mounting bracket</li><li>• 724-069 coupler</li><li>• Reducing coupling 1 x 3/4 FNPT</li><li>• Elbow 3/4" M 3/8" SW</li><li>• Port connector 3/8" SW</li><li>• TFE braided hose 3/8" x 5"</li><li>• Grounding clip</li></ul>
BASEGASKIT	Basic Gas Delivery Kit	<ul style="list-style-type: none"><li>• Check valve 1/4" F-M 1/3#</li><li>• Female cross 1/4" NPT</li><li>• Pressure relief valve</li><li>• Plug valve 1/4" SW 1/4"M</li><li>• PFA tube 1/4" x 6"</li><li>• Adapter 1/4" M x 1/4" SW</li><li>• TFE braided hose 1/4" x 5"</li></ul>



## Ordering information

Each BasicPak Solvent Delivery System is configured to meet the unique requirements of the laboratory it serves. A Fisher Scientific Representative will work with you to determine the optimal container fleet size and accessories to assure your needs are met by establishing:

- Types of chemicals required
- Expected annual usage of each chemical
- Other site-specific requirements



# NOWPak II

The NOWPak II precleaned liner technology is offered in a pressurizable, stainless-steel overpack, which is returnable and reusable. The system permits ultra-clean chemical dispensing without direct contact of the chemical with the drive gas. Drive gas pressure is applied to the outside of the liner, minimizing gas entrainment or microbubble formation.

As the fill material is dispensed, the inner liner collapses. After emptying the system, the liner is simply removed and the overpack is ready for insertion of a new, precleaned liner. The overpack, closer, and dip tube are designed for reuse. Recommended market segments include (but not limited to) pharmaceutical and biopharmaceutical.

## Key features

- Reusable stainless-steel (304) overpack with 15 psi maximum operating pressure
- Pressure or pump dispense connector options
- Liners are available in fluoropolymer materials (for highly aggressive chemical fills), or coextruded polyethylene materials (for less aggressive applications that require ensured purity or gas barrier protection).
- Breakseal or thread ON/OFF closure options

Available Size: 19 L

## Ordering information

Each NOWPak II System is configured to meet the unique requirements of the laboratory it serves. A Fisher Scientific representative will work with you to mutually determine the optimal container fleet size and accessories to assure your needs are met by establishing:

- Types of chemicals required
- Expected annual usage of each chemical
- Other site-specific requirements





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