



aerospace climate control electromechanical filtration fluid & gas handling hydraulics pneumatics process control sealing & shielding





Portable Filter Carts

Models 5MFP & 10MFP with Moduflow™ 𝒫 Lus and Intelli-Cart™





Applications

- Filtering new fluid before putting into service
- Transferring fluid from drums or storage tanks to system reservoirs
- Conditioning fluid that is already in use
- Complimenting existing system filtration
- Removing free and emulsified water from a system
- For use with fluids such as hydraulic, gear and lube oils

Parker portable filter carts are the ideal way to prefilter and transfer fluids into reservoirs or to clean up existing systems.

Fluid should always be filtered before being put into use. New fluid is not necessarily clean fluid. Most new fluids (right out of the drum) are unfit for use due to high initial contamination levels. Contamination, both particulate and water, may be added to a new fluid during processing, mixing, handling and storage.

Water is removed by installing
Par-Gel[™] elements in the outlet
filter. Par-Gel[™] elements are
made from a polymer which has a
very high affinity for free water.cart is the most
to protect your s
the harm that ca
contamination.

Once water comes into contact with this material, it is removed from the system.

The Parker portable filter cart uses two high capacity ModuFlow[™] Plus filters for long element life and better system protection. The first stage (inlet) filter captures larger particles, while the second stage (outlet) filter captures finer particles or removes water. A rugged industrial quality gear pump gets the job done fast.

Using a Parker portable filter cart is the most economical way to protect your system from the harm that can be caused by contamination.

Features	Advantages	Benefits	
Two filters instead of one w/ 2.5 times increased dirt	Pump protection and long element life	Element cost savings and trouble-free service	
Wide variety of particulate elements available	Capable of getting a fluid to a desired cleanliness level	Extends fluid life and system performance	
Par-Gel™ water removal elements available	Removes "free water" from a system	Gets dirt and water out of system with one process	
Heavy duty frame	Rugged and durable	Built to last	
Lightweight and portable	Easy to move from place-to-place	One person operation	
Two flow rates available: 20 lpm or 40 lpm	Enables use in low or high viscosity applications	Matched to your needs	
Eleven-foot hose and wand assemblies included	Additional hardware not necessary	Ready to use as received	



Features



Outlet Connection

Specifications

Maximum Recommended Fluid

Viscosity: 5MFP - 647cSt 0.85 specific gravity 10MFP - 108 cSt 0.85 specific gravity

Visual Indicator (outlet filter): Visual differential type 3-band (clean, change, bypass)

Filter Bypass Valve Settings (Integral to Element): Inlet – 3 psid (0.2 bar) Outlet – 35 psid (2.4 bar)

Operating Temperature:

Nitrile (standard) -40°C to +66°C

Electrical Service Required:

5MFP – 240/415 volts, 50 Hz, single phase, 3 phase 10MFP – 240/415 volts, 50 Hz, single phase, 3 phase

Electrical Motor:

5MFP – ½ hp @ 1440 rpm, Open, Drip Proof 10MFP – ¾ hp @ 1880 rpm, Open, Drip Proof Thermal overload protection

Option:

Air motor - 60 1/sec

Construction:

Cart frame – Steel Filter head – Aluminum Filter bowl – Steel Hoses – Clear Plutone Wands – Steel tube

Weight: 55kg

Dimensions: A = Height: 1104mm

- B = Width: 685mm
- C = Depth: 504mm

New feature!

Parker is pleased to announce its R&D effort to offer a diagnostic filter cart - the Intelli-Cart. The icountPD particle detector, the most up-to-date technology in solid particle detection, can be mounted to the standard frame of the filter cart for enhanced monitoring of your hydraulic system. The icountPD, coupled with the filter cart is a cost effective solution to fluid management and contamination control. Ask your sales representative today for more information.

R

С



Typical Fluid Cleanliness Level Requirements

Many manufacturers of hydraulic components have established fluid cleanliness levels for their components. Using a portable filter cart can be a very effective way to reach and maintain these cleanliness levels.

ISO Cleanliness Level	
16/14/11	
17/15/12	
18/16/13	
18/16/13	
19/17/14	
20/18/15	
20/18/15	

Filter Cart Element Performance

Media Code	Filter Media	Capacity (Grams)
40W	Woven Wire	*
40SA	Synthetic	*
20Q	Microglass III	140
10Q	Microglass III	135
05Q	Microglass III	130
02Q	Microglass III	110



Notes: Multipass test run @ 80 gpm to 50 psid terminal - 5 mg/l BUGL.



Filter Cart Performance

Fluid cleanliness levels are a function of initial contamination levels, contamination ingression rates, reservoir size and filter element efficiency. The chart below lists approximate time requirements to achieve certain cleanliness levels based on the assumptions noted.

Reservoir Capacity (litres)	Time Required (Hours)	Projected Cleanliness Level (ISO)
200	0.5	20/18/15
200	1.0	17/15/12
200	2.5	16/14/11
400	1.5	18/16/13
400	2.5	17/15/12
400	4.0	16/14/11
800	2.5	19/17/14
800	3.5	18/16/13
800	5.0	17/15/12

Notes:

The results in the chart are based on the following assumption:

1. Initial contamination level is 500,000 particles greater than 10 micrometers per 100 ml of fluid (10MFP cart).

Inlet filter fitted with 40SA element; outlet with 20Q element.

3. System ingression rate equal to $1\,X\,10^6$ particles greater than 10 micrometers entering the system per minute.

The Intelli-Cart[™] with particle detector provides an excellent method for filtering and trending contamination levels.

For optimum particle detector performance results when monitoring contamination levels, fluid viscosity range should be 10 - 60 cst.

Par-Gel[™] Media Water Capacity

Model	Fluid Viscosity	Capacity
5MFP	20 cst	600 ml
	50 cst	420 ml
10MFP	20 cst	500 ml
	50 cst	300 ml

Par-Gel" elements are designed to remove "free water", which is defined as water that is above a
particular fluid's saturation level.

 Capacity is very dependent on flow rate and viscosity. Not recommended with fluids in excess of 100 cst.

Assembly

- 1. Install hoses to inlet and outlet filters by threading the hose end to the fitting on the filter flange.
- 2. Connect the tube wands to the swivel fitting on the hose end. When servicing the tube wand, do not over-torque the metal fittings going into the coupling. Generally, 1/4 turn beyond hand-tight is sufficient.
- 3. The Intelli-Cart[™] is shipped with a bag that contains user manuals, iPD programming disk, and accessory parts.
- 4. The iPD is shipped with the factory default setting. Users can reprogram the iPD with the cable located in the attached bag, the program disk and the iPD owners manual.

Operating Instructions

- Insert the inlet wand assembly into the supply fluid receptacle (drum/reservoir). Inlet shown on page 3.
- 2. Insert the outlet wand assembly into the clean fluid receptacle (drum/ reservoir). Outlet shown on page 3.
- 3. Verify that the ON/OFF switch is OFF and plug the cord into the proper grounded power source (3 wire).
- 4. Turn switch to ON position and check outlet wand for oil flow. Allow 30 to 60 seconds for filters to fill with oil. If repeated attempts to obtain oil flow fail, check pump inlet fittings for tightness, remove inlet filter access cover and verify the cover sealing o-ring is in place.

For very viscous fluids it may be necessary to pour 1 or 2 litres of fluid into the inlet filter housing to prime pump initially.

- 5. The condition of the filter element should be monitored by observing the cleanliness indicator on the outlet filter. When the indicator is in the CHANGE position, both inlet and outlet filter elements MUST be replaced to prevent fluid from going through the bypass in the filters.
- 6. The inlet filter element is provided with a 3PSI bypass spring, and prevents the pump from cavitating if the element is not changed. The outlet filter element is provided with a 35PSI bypass spring to prevent excessive pressure which may be harmful to personnel or to the filter cart. Warning: The filter bypass spring acts as a relief valve for the pump. Do not restrict the outlet hose with a shut-off valve which will defeat the function of the bypass valve, causing excessive pressure, which may be harmful to personnel or to the filter cart.
- 7. The cleanliness indicator works on differential pressure and will indicate the condition of the element (CLEAN, CHANGE, or BYPASS).

NOTE: The filter cart must be in operation for the indicator to read properly.

Maintenance Instructions

- 1. Turn switch to OFF position and unplug cord from electrical outlet.
- 2. Remove tube wands from oil to prevent siphoning.
- 3. Loosen hex head screws on filter cover. Turn cover to clear screws, remove cover.
- 4. Pull filter element from the filter head.

a) Replace the synthetic or Microglass III elements. Verify correct element replacement.b) Wire mesh elements can be cleaned. Ultrasonic cleaners provide best results.

- 5. Install element in filter housing. Make sure element o-rings seat properly into the head, making sure that the notch on the element lines up with the notch in the head.
- 6. Inspect the cover o-ring and replace if necessary.
- 7. Replace cover and tighten hex head screws until they are snug. Do not over-torque (16 - 19 Ft. Lbs.) these screws. Do not interchange the inlet filter cover with the outlet filter cover.
- Contact customer service in Sydney on 02 9842 5150 regarding iPD calibration.
- 9. iPD removal: remove oil lines from the iPD at the two fittings closest to the iPD. Disconnect the two cables from the iPD. Remove iPD from cart via two screws. The cart can be used without the iPD as long as the sample hoses are removed from the System 20. Protect sampling connectors from contamination.

Trouble Shooting

o				
Problem	Cause	Solution		
	ON/OFF Switch	Turn switch ON, replace switch if defective		
Does not start	No electrical power	Plug in cart		
	Defective motor	Replace		
No oil flow or erratic pump noise	Filter housing not filled with oil Suction leak Defective pump	Allow pump to run 30 to 60 seconds Check tightness of inlet fittings Check o-ring in inlet filter cover for nicks Kink or restriction in inlet hose Add 1 or 2 quarts of oil to inlet filter Replace pump		
Indicator roads CHANCE or DVDACC	Element dirty	Replace or clean elements (both filters)		
Indicator reaus change of DTFASS	Oil extremely cold or viscous	Change element to coarser micron rating		
	No outlet element	Install element		
Indicator does not seem to move	40 micron element installed in outlet filter	Check cart model number to verify correct element. The inlet filter has a rating RFP prefix; the outlet filter has an ILP prefix		



How to Order:

Select the desired symbol (in the correct position) to construct a model code.

Example:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
10MFP	40SA	10Q	В	PD TOT

BOX 1: Basic Assembly BC		BOX 3: Out	BOX 3: Outlet Filter Element	
Symbol	Description	Symbol Description		
5MFP	20 LPM 240 VAC	02Q	Microglass III, 2 micron	
10MFP	40 LPM 240 VAC	05Q	Microglass III, 5 micron	
5MFP3P	20 LPM 415 VAC	10Q	Microglass III, 10 micron	
10MFP3P	40 LPM 415 VAC	20Q	Microglass III, 20 micron	
10MFPAM	40 LPM Air Motor	WR	Par-Gel [™] Water Removal	

BOX 5: Options			
Symbol	Description		
1	None		
PD**	iPD with digital Display		
PDL**	iPD with digital display and integrated Moisture Sensor		
TOT	Flow Totaliser		

** Limited to viscosity of 150cst. Consult Parker for higher viscosities

BOX 2: Inlet Filter Element		
Symbol	Description	
40SA	Synthetic, 40 micron	
40W	Stainless Steel Mesh, 40 micron nominal	
20Q	Microglass III, 20 micron	

BOX 4: Seals		
Symbol	Description	
В	Nitrile (NBR)	
V	Fluorocarbon	

Note: Fluorocarbon seals are non standard and have a longer lead time.

Replacement Elements

	Nitrile Seals		Fluorocarbon Seals	
Media	Inlet Filter (3 psid integral bypass)	Outlet Filter (35 psid integral bypass)	Inlet Filter (3 psid integral bypass)	Outlet Filter (35 psid integral bypass)
02Q	N/A	937397Q	N/A	937405Q
05Q	N/A	937398Q	N/A	937406Q
10Q	N/A	937399Q	N/A	937407Q
20Q	940971Q	937400Q	940974Q	937408Q
40SA	940802	N/A	940972	N/A
40W	940803	N/A	940973	N/A
WR	N/A	940734	N/A	940736

Note: Fluorocarbon elements are non standard and have a longer lead time.



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