



**You have the machine, WE HAVE THE SOLUTION.**

High Pressure Coolant Systems



Mist Collectors



Chillers



Filtration Systems



Wash Down Guns



## PRODUCT GUIDE

**Demand Quality. Insist on MP Systems.**



## Benefits Of High Pressure Coolant Systems

1

### Optimal Chip Control

High pressure coolant penetrates the vapor barrier between the cutting tool and the workpiece to provide rapid quenching. This makes chips brittle, causing them to immediately break into much smaller pieces that are quickly flushed away. There are no long, stringy chips that can wrap around the workpiece and chuck. When operators don't have to stop the machine to clear chips and conveyor clogs, they can run the machine unattended and achieve 'lights out' manufacturing.

2

### Longer Tool Life

High pressure coolant lubricates tools and reduces heat, which results in significantly longer tool life. It's common for HPCS users to find that their cutting tools last five times longer.

3

### Improved Surface Finishes

High pressure coolant evacuates chips from the work area before the cutting tool has a chance to re-cut them. This prevents marring of the workpiece, resulting in smoother surface finishes.



4

### More Machine Tool Capabilities

Machine tools that previously could not efficiently perform gun drilling or deep-hole drilling can easily perform these operations when running with high pressure coolant.

5

### Reduced Cycle Times & Increased Production

With high pressure coolant, machine operators can typically increase speed and feed rates by a minimum of 20 to 30 percent, resulting in much faster cycle times!

6







### They Literally Pay for Themselves

Adding a high pressure coolant system to a machine tool is a financially smart move. The investment is recovered within months due to the immediate cost savings resulting from longer lasting cutting tools, faster cycle times, fewer work stops, and the ability to run the machine unattended.

# MILL & LATHE FEATURE COMPARISON

FIND THE MOST SUITABLE MP SYSTEMS COOLANT SYSTEM FOR YOUR MACHINE TOOL

MORE CAPABILITY, MORE DURABILITY

MACHINING APPLICATION	 <p>Light Duty</p>	<b>FEATURES</b> <ul style="list-style-type: none"> <li>• Medium pressure 300 PSI</li> <li>• Single filtration</li> <li>• 1 year parts warranty</li> </ul>	
	 <p>Industrial</p>	<b>FEATURES</b> <ul style="list-style-type: none"> <li>• High pressure 1,000 PSI</li> <li>• Dual filtration with deaeration feature</li> <li>• Very durable construction</li> </ul>	<ul style="list-style-type: none"> <li>• Low maintenance</li> <li>• Available chiller option</li> <li>• Available mist collector option</li> <li>• 2 year parts warranty</li> </ul> 
	 <p>Mission Critical</p>	<b>FEATURES</b> <ul style="list-style-type: none"> <li>• Many specialized options available</li> <li>• Variable volume up to 40 GPM</li> <li>• Variable pressures up to 3,000 PSI</li> <li>• Dual filtration with deaeration feature</li> </ul>	<ul style="list-style-type: none"> <li>• Abrasive duty upgrade option</li> <li>• Low maintenance</li> <li>• Available chiller option</li> <li>• Available mist collector option</li> <li>• 2 year parts warranty</li> </ul> 

## UL SERIES

The 'UL' Series is a basic design for light duty applications.

- OD & ID turning operations on free cutting materials
- Shallow hole drilling
- Light duty
- 1 Port
- 1 year parts warranty
- PLC message displayed

## R SERIES

The 'R' Series is designed to operate with minimal maintenance in environments where machine uptime is critical.

- OD & ID turning operations on all materials
- Deep hole drilling
- Pocket milling
- Abrasive duty option available
- Use chiller option to enhance work piece
- 2 ports
- 2 year parts warranty
- 7x32" 5 micron quick change filter bags
- PLC message displayed
- Dirty filter alarm
- Integrated feed pump

## VR SERIES

The 'VR' series is engineered to be extremely durable and energy efficient. It allows full advantage to be taken of the flexibility and range of capabilities found in very sophisticated machine tools.

- OD & ID turning operations on all materials
- Deep hole drilling
- Pocket milling
- Abrasive duty option available
- Use chiller option to enhance work piece thermal stability
- Maximum performance for a variety of tooling sizes and requirements
- 2 ports
- 2 year parts warranty
- 7x32" 5 micron quick change filter bags
- PLC message displayed
- Dirty filter alarm
- Integrated feed pump

LATHES



MILLS



## VR SERIES

### Standard Features:

- Variable volume up to 8 GPM, 16 GPM, twin 8 GPM, or 20 GPM
- User programmable pressures 250-1000 PSI with appropriate interface
- 50 gallon vertical reservoir (VR8)
- 70 gallon vertical reservoir (VR16, VRT, VR20)
- 208/230V standard, not field retrofittable
- 480V special order, not field retrofittable
- Use with water-based coolant or suitable oils

### Dimensions:

Floor:

36"L x 28"W x 42"H (VR8)

42"L x 38"W x 42"H (VR16, VRT, VR20)

Shipping:

48"L x 35"W x 66"H - 850lbs (VR8)

54"L x 48"W x 66"H - 1315lbs (VR20)

54"L x 48"W x 66"H - 1250lbs (VR16, VRT)

### Options:

- MP 1200 Mist Collection
- Post HEPA filter
- Additional ports
- Auto Cross Over Filtration
- Abrasive Duty option
- Circuit Breaker Kit
- Simultaneous Pressure (Turret Lathes)
- Dual Pressure
- Mounted Chiller, contact MP Systems for details

**Models:** VR8, VR16, VRT, VR20



## R SERIES

### Standard Features:

- 8 GPM, 16 GPM, or twin 8 GPM, up to 1000 PSI
- Manually adjustable pressures
- 50 gallon vertical reservoir (RF8)
- 70 gallon vertical reservoir (RF16, RTF)
- 208/230V standard
- 480V special order
- Use with water-based coolant or suitable oils

### Dimensions:

Floor:

36"L x 28"W x 42"H (RF8)

42"L x 38"W x 42"H (RF16, RTF)

Shipping:

48"L x 35"W x 66"H - 850lbs (RF8)

54"L x 48"W x 66"H - 1250lbs (RF16, RTF)

### Options:

- MP 1200 Mist Collection
- Post HEPA filter
- Additional ports
- Auto Cross Over Filtration
- Abrasive Duty option
- Circuit Breaker Kit
- Mounted Chiller, contact MP Systems for details

**Models:** RF8, RF16, RTF



### Abrasive Duty Upgrade:

MP Systems worked extensively on developing high pressure coolant systems that can withstand the challenges of cutting abrasive materials such as cast iron, cast aluminum, and steels coated with mill scale. The proprietary upgrades we have developed for our R and VR series systems elevate our equipment to be more durable and reliable in abrasive environments. To inquire if this is a good option for your shop, contact us!

## VR10/VR15 SERIES

### Standard Features:

- Variable volume up to 10 GPM (VR10) or 15 GPM (VR15)
- User programmable pressures 250-3000 PSI with appropriate interface
- 70 gallon vertical reservoir
- 480V
- Use with water-based coolant

### Options:

- MP 1200 Mist Collection
- Post HEPA filter
- Auto cross over filtration
- Circuit Breaker Kit
- Extended Life Pleated Cartridges

### Dimensions:

Floor:  
42"L x 38"W x 42"H (VR10, VR15)

Shipping:  
54"L x 48"W x 66"H - 1325lbs (VR10)  
54"L x 48"W x 66"H - 1375lbs (VR15)

### Models: VR10/VR15



## VR40 SERIES

### Standard Features:

- Variable volume twin 20 GPM (40 GPM total)
- User programmable pressures 250 up to 1500 PSI with appropriate interface
- 95 gallon vertical reservoir
- 480V standard, not field retrofittable
- Use with water-based coolant or suitable oils

### Options:

- MP 1200 Mist Collection
- Post HEPA filter
- Additional ports
- Auto Cross Over Filtration
- Abrasive Duty option
- Mounted Chiller, contact MP Systems for details

### Dimensions:

Floor:  
52"L x 49"W x 53"H

Shipping:  
54"L x 48"W x 66"H - 2,000lbs

### Models: VR40-1500



## UTILITY LINE SERIES

### Standard Features:

- Up to 12 GPM
- Up to 300 PSI
- Qty (1) 7x32" 5 micron quick change filter bag
- 208/230V standard
- 480V special order
- Use with water based coolants ONLY
- Built in feed pump (mills only)

### Options:

- Circuit Breaker Kit

### Dimensions:

Floor:  
29"L x 22"W x 35"H

Shipping:  
48"L x 35"W x 66"H - 400lbs

**Model:** UL300



## WASH DOWN SYSTEM

### Standard Features:

- 12 GPM, 26 PSI
- 1 HP motor
- 24VDC control / 208/230 volt
- Universal mounting bracket for easy installation
- Magnetically attached on/off hand control and auto shut off
- Operates independent of machine

### Dimensions:

Floor:  
Hose length, 30'  
Feed Pump

Shipping: (Two small parcel boxes)  
20"L x 17"W x 14"H - 38lbs  
20"L x 12"W x 10"H - 57lbs

**Model:** AT WD



Watch the  
product video





## MP 1200 MOUNTED MIST COLLECTOR

### Standard Features:

- Mounts on top of R and VR Series pumps
- 1200 CFM (variable speed)
- 3 stage filtration
- Baffle to keep heavy particles out
- 95% efficiency
- 208/230V standard
- Basic installation kit included
- Water soluble coolant only

### Options:

- Post HEPA filter
- 480V special order

### Dimensions:

Floor:  
24"L x 25"W x 40"H

Shipping:  
54"L x 48"W x 66"H - 400lbs

**Model:** MP 1200



## MP 1200 MACHINE MOUNTED MIST COLLECTOR

### Standard Features:

- Mountable to a flat surface above your machine tool
- 1200 CFM (variable speed)
- 3 stage filtration
- Baffle to keep heavy particles out
- 95% efficiency
- 208/230V standard
- Mounting brackets supplied at no additional charge
- Water soluble coolant only

### Options:

- Post HEPA filter
- 480V special order

### Dimensions:

Floor:  
26"L x 26.25"W x 44"H

Shipping:  
48"L x 35"W x 66"H - 425lbs

**Model:** MP 1200



## MP 1200 MIST COLLECTOR WITH FLOOR STAND

### Standard Features:

- Allows for mist collection when pump and machine mounted cannot be used
- 1200 CFM (variable speed)
- 3 stage filtration
- Baffle to keep heavy particles out
- 95% efficiency
- 208/230V standard
- Easy access to filtration elements
- Water soluble coolant only

\*Floor stand supplied at additional cost

### Options:

- Post HEPA filter
- 480V special order

### Dimensions:

Floor:  
26.75"L x 26.75"W x 83.50"H

Shipping:  
48"L x 35"W x 66"H - 425lbs

**Model:** MP 1200





## ARE YOU CHASING OFFSETS?

The MP Systems' Chiller Series is built specifically for the harsh environments of the CNC machining industry. Its intended use is for any machining application where increasing coolant temperature can cause trouble holding tight tolerances.

- Reduces need to check parts
- Reduces need to adjust offsets in program
- Helps maintain tight tolerances, no growth due to coolant temperature
- Based on part, not industry

Our chillers are designed to operate between 70F - 90F ambient. The RC and CS chillers are open-loop systems meant to pull from and return to the machine tool tank. Intended for use with water based coolants or oils with viscosities between 90 and 140 SUS @ 100F.

MP Systems offers a complimentary chiller test kit so that you can track your offsets, temperature and time. MP Systems will help you determine the benefits of a chiller.

**Our chillers include more standard features than our competitors!**

Please contact sales for more details.



## CHILLER ADVANTAGES

The MP Systems Chiller is designed to maintain both the machine and pump's tank temperatures at or above ambient temperature.

The RC36 and CS36 are designed to remove up to 36,000 BTUs/hour @ 70F ambient.

With the mounted RC series, coolant is pulled from the MP Systems HPCS tank and circulated through a heat exchanger in the Chiller where it is cooled. The majority of coolant is then sent to the machine tool tank and the rest is returned to the MP HPCS tank. The MP HPCS tank maintains its coolant level by cycling the feed pump on and off based on float level settings.

The standalone CS series open loop chiller will constantly circulate coolant from the machine tank and maintain machine tank temperature.

**There is little maintenance required with the MP Systems Chiller series.**

- Washable condensing filter
- No need to add refrigerant



AMBIENT

## STAND ALONE CHILLER

### Standard Features:

- CS36 - 36,000 BTU chiller
- +/- 1 degree F
- Includes supply pump and filtration
- Ambient and set point live temperature monitoring
- PLC messages displayed
- Standard filtration prevents heat exchanger clogging
- Adjustable auto shutdown feature
- No need to replace compressor over its lifetime
- No need to add refrigerant
- 2 year parts warranty
- Available in 208/230V and 480V
- Federally compliant hermetically sealed industrial compressor (no automotive components)

### Options:

- Circuit Breaker Kit

### Dimensions:

Floor:  
39"L x 30"W x 47"H

Shipping:  
54"L x 48"W x 66"H - 650 lbs

Installation kits are included  
for stand alone chillers.

**Model:** CS36



## MOUNTED CHILLER

### Standard Features:

- 36,000 BTU chiller
- +/- 1 degree F
- Includes installation kit, mounts to R series HP systems
- Includes supply pump and filtration
- Ambient and set point live temperature monitoring
- PLC messages displayed
- Standard filtration prevents heat exchanger clogging
- Adjustable auto shutdown feature
- Federally compliant hermetically sealed industrial compressor (no automotive components)
- 2 year parts warranty
- Mounts on MP Systems VR8, RF8, RTF
  - Factory Order only. Not field retrofittable.
  - Available in 208/230V and 480V
- No need to add refrigerant

### Dimensions:

Floor (chiller only):  
38.5"L x 25.5"W x 22"H

Shipping (chiller only):  
54"L x 48"W x 66"H - 650lbs

*\*For water soluble coolants only.*

Floor (mounted on 70 gallon reservoir):  
43"L x 38"W x 66"H

Shipping:  
54"L x 48"W x 66"H - 900lbs  
(VR8, RF8 compatible units)  
54"L x 48"W x 66"H - 1,300lbs  
(RTF compatible units)

Installation kits are included with  
the mounted chiller/HP system.

**Model:** RC36



# SWISS LATHE FEATURE COMPARISON

FIND THE MOST SUITABLE MP SYSTEMS COOLANT SYSTEM FOR YOUR **SWISS** MACHINE TOOL

MORE CAPABILITY, MORE DURABILITY

## FEATURES

- 8 GPM, 1000 PSI water based coolants
- 5 GPM, 2000 PSI oil
- Available 8 port remote valve blocks
- Built in feed/supply pump
- Low maintenance
- 2 year parts warranty

**V2**  
SWISS

## FEATURES

- 8 GPM, 1000 PSI water based coolants
- 5 GPM, 2000 PSI oil
- 50 gallon reservoir with dual filtration and deaeration feature
- Available 8 ports
- PLC control
- 2 large capacity, quick change filters
- 2 year parts warranty

**RDH**  
SWISS

## FEATURES

- 8 GPM, 1000 PSI water based coolants
- 5 GPM, 2000 PSI oil
- 18,000 BTU built in chiller
- Ambient temperature tracking
- Available 8 ports
- PLC control
- 1 large capacity, quick change filter
- Built in feed/supply pump
- Low maintenance
- 2 year parts warranty

**S2**  
SWISS

### V2 SWISS

The 'V2' series is designed for use in multi-tool Swiss lathe environments for:

- Optimal chip control
- Permit otherwise impossible machining operations including thru coolant deep hole and gun drilling
- Allow faster cycle times and longer tool life
- Improve coolant filtration
- Dirty filter alarm
- 2 year part warranty
- 7x32" 5 micron quick change filters
- Built in feed pump
- PLC message display

### RDH SWISS

The 'RDH' series:

- Best solution for oil aeration problems
- Designed for use with machines that have restricted tank capacity
- Provides additional filtration capacity
- Optimal chip control
- Allow faster cycle times and longer tool life
- 2 year part warranty
- 7x32" 5 micron quick change filters
- Built in feed pump
- PLC message display

### S2 SWISS

The 'S2' series is designed for use when:

- Temperature control and mitigation of thermal growth is critical to a machining process
- A coolant chiller is needed to provide the level of thermal stability required to machine high volume high precision parts
- Space is limited in tightly packed Swiss machine environments
- 2 year part warranty
- 7x32" 5 micron quick change filters
- Built in feed pump
- PLC message display

LATHES



MILLS



## V2/S2 SWISS

### Standard Features:

- 5 GPM, up to 2000 PSI, oil only
- 8 GPM, up to 1000 PSI
- Filter evacuate system for cleaner filter changes (V2)
- Heat exchanger prevents excessive heat (V2)
- 208/230V standard
- Use with water-based coolant or suitable oils
- 8 port remote valve block
- 18,000 BTU build-in chiller (S2)
- Ambient temperature tracking (S2)
- Programmable 7-day timer clock (S2)

### Options:

- 12 ports
- 480V
- 3 GPM, 3000 PSI oil
- 10 GPM, 1000 PSI oil

### Dimensions:

Floor Dimensions:

44"L x 24"W x 36"H (V2)

51"L x 21"W x 44"H (S2)

Shipping Dimensions:

54"L x 48"W x 66"H - 750lbs (V2)

66"L x 34"W x 66"H - 850lbs (S2) 650 lbs

**Models:** V2-O, V2-W, V2-HO, V2-HW, S2-O, S2-W



## RDH SWISS

### Standard Features:

- 5 GPM, up to 2000 PSI, oil only
- 8 GPM, up to 1000 PSI
- Heat exchanger prevents excessive heat
- 50 gallon reservoir
- 208/230V standard
- 480V special order
- Use with water-based coolant or suitable oils
- 2 ports or 8 ports version available
- Deaeration feature

### Options:

- Abrasive Duty option
- 3 GPM, 3000 PSI oil
- 10 GPM, 1000 PSI oil

### Dimensions:

Floor:

36"L x 28"W x 42"H

Shipping:

48"L x 35"W x 66"H - 850lbs

**Model:** RDH

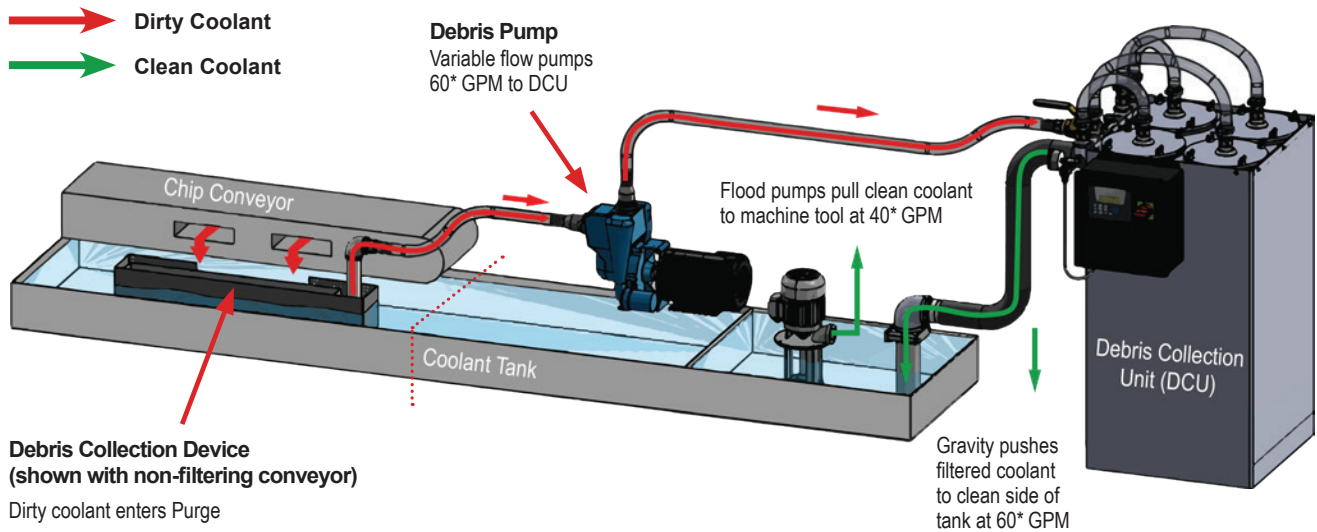


## PURGE ADVANCED FILTRATION

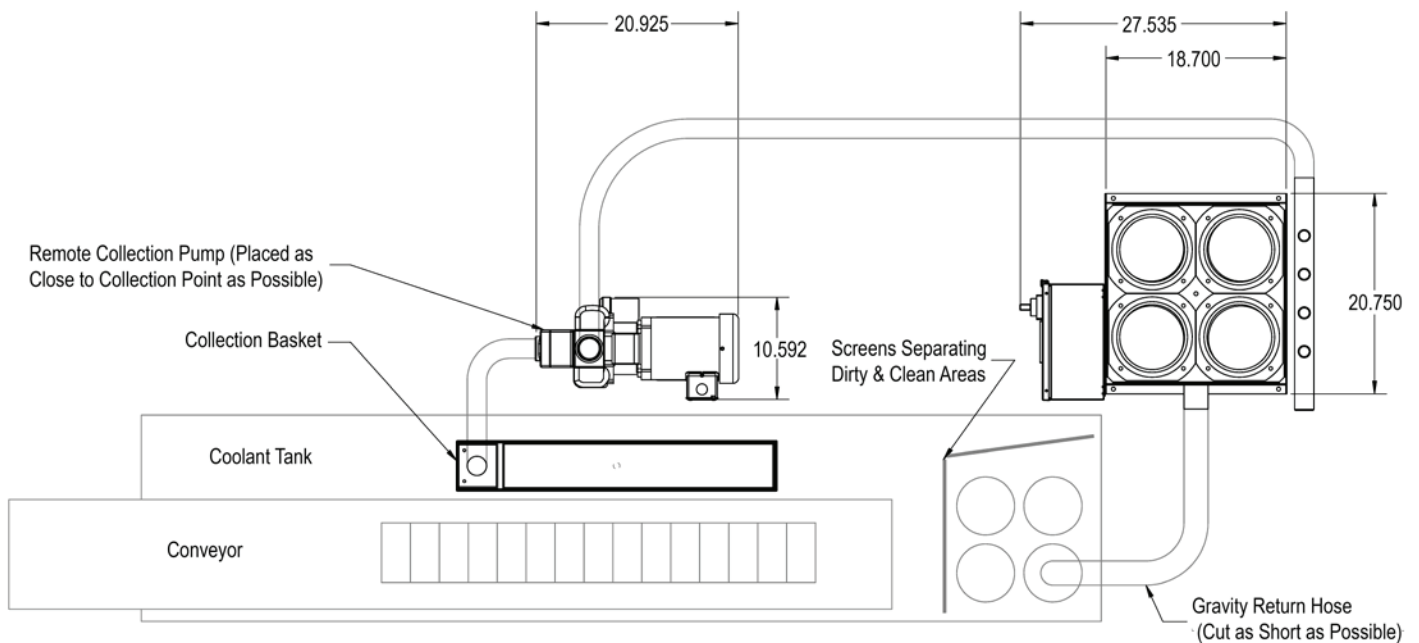
### CLEAN SIDE OF COOLANT TANK STAYS FULL

Clean, filtered coolant enters tank faster (60\* GPM) than it's sent to machine tool (40\* GPM)

\*Example only



### PURGE FOOTPRINT - Compact and Efficient



## PURGE ADVANCED FILTRATION

### Key Features

- Suitable for machine flows up to 60 GPM
- Filtration to 3  $\mu$  (5  $\mu$  standard)
- Economical
- Holds up to 20 gallons of debris
- Quick change filters
- Low maintenance
- Use with or without chip conveyor
- Easy to clean
- 2-Year warranty



See Video

### Advantages

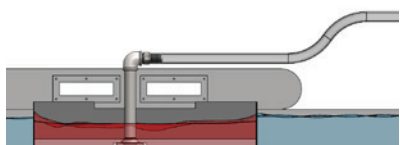
Prevents chip dams at screens and eliminates coolant starvation of the flood & high pressure pumps. Cleaner coolant improves part quality and extends cutting tool life. When the Purge is full, users simply lift out the filter bags and throw them away. Coolant lasts longer and the machine tool's coolant tank doesn't need to be cleaned nearly as often with the Purge.

### Use with Filtering Conveyor and Non-Filtering Conveyor



- **Filtering Conveyors/Drum/Filter Box:**

Provides exceptional performance in most environments.  
Basket is available if needed.



- **Non-Filtering Conveyors:**

Engineered baskets are available which can collect approximately one gallon of coarse chips. Manually empty.

### Filter Bags

Use #2, 7" x 32" filter media, polyester felt bags, pleated paper bags, or coarse reusable mesh bags. 5 u polyester felt bags are readily available from MP systems at \$4 each. Change all four filters for \$16! No tools are required to change filters, and it can be done while the machine tool is running. When ordering the filters from MP, please reference our part number listed in the table below!

### Specs - Purge Advanced Filtration System

Fluid Control	Variable Frequency Drive
Filtration	(4) #2 7" x 32" Quick change bag filters, pleated paper filter elements or other <b>Part Number:</b> HB BAG PURGE ST #2 5MC 7X32
Power	230V, 3 HP
Min/Max Flow	30 - 60 GPM
FLA	9 Amps
Weight (lbs)	300

## THE BETTER OPTION THAN CYCLONIC FILTRATION

### **Cyclonic filtration uses centrifugal force to filter out particles.**

The heavier contaminants are carried away to a settling or “sludge” tank, while lighter particles or chips return into the machine tool tank. Because of this, cyclonic filters should be used as pre-filters or first stage filters since smaller chips or dust get by and need to be removed by a fine screen or filter bag.

Although sometimes perceived as “maintenance free”, cyclonic filtration requires the machine tool to be stopped in order for someone to clean the sludge tank. **Cyclonic filtration is a good option for some applications, just not all!**

### **Alternatively, filter bags are inexpensive and easy to change.**

They operate much like a trash bag by catching and removing even the finest of particles. Some additional benefits include no downtime to shovel sludge, cleaner coolant, and longer life for cutting tools.

MP Systems’ R and VR series coolant pump filters can be changed within minutes, even while the pump is running. Simply remove four wingnuts, lift the cover, and pull out the dirty filter bags. This unique system also has the dual benefit of filtration and aiding with coolant de-aeration.



**1** Twist off wingnuts. No tools required!



**2** Lift out bag.



**3** Drop in waste can.

***Your machine tool represents a sizeable capital investment.  
Shouldn't you protect it with the best filtration system?***



# MP SYSTEMS – WHO WE ARE

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**At MP Systems we develop products designed to evolve and keep up with the ever changing manufacturing industry.**

Since our humble beginning we've worked directly with our customers to produce the best solutions for their high pressure needs. We've succeeded in providing reliable products that revolutionize the efficiency and longevity of your machine tool. Our unwavering call for quality set the foundation for new products, like our Purge unit, and upgrades, such as the R and VR Series abrasive duty options, to flourish.

Our high pressure coolant systems, chillers, filtration systems, and accessories for machine tools, support a wide variety of applications tailored to your company's manufacturing needs.

**Demand Quality.** Insist on MP Systems.







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Specifications are subject to change