

Ideal for grinding, honing, light metal removal.

The ChipMaster 4470GX Series Gravity Filter System from Master Conveyors is a simple and efficient way to filter out a wide array of contaminants from machine coolant. The 4470 Series has seven standard sizes that range from 10 gpm to 100 gpm. (See chart below for flow capacities on water emulsion and cutting oil.)

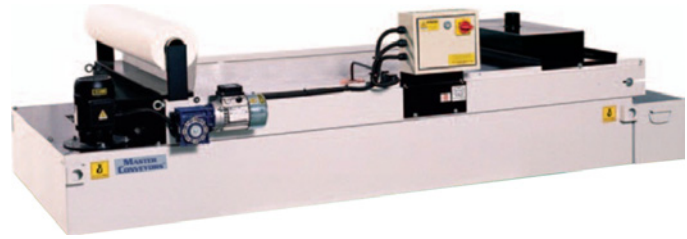
### APPLICATIONS

The ChipMaster 4470GX series is an excellent solution for filtering metal fines from the machining process. The simplicity of construction provides for a long trouble free service life, and easy media change out. Filtration levels from 5 to 100 microns are available depending on the roll media micron selected. Media rolls are low cost and readily available.

### Features:

- Fully automatic operation
- Steel swarf hopper
- Roll of media
- Immersed pump

## Gravity Bed Filtration Systems



### Sequence of Operation

Chips and coolant are delivered to the inlet port of the filter and onto the filter media which is supported on the strainer bed. The solid particles, such as swarf, machining chips and other particulate, are retained by the media while the filtered coolant enters into the coolant tank below. Clean coolant is pumped back to the machine via the immersed pump located in the tank. The filter has an automated media advancement system. As contaminants build up on the filtering media restricting flow, the media is advanced automatically. Used filter media is collected in the hopper.

### SPECIFICATIONS

Model	Tank Capacity Gallons	Flow Rate Soluble Oil GPM	Flow Rate Neat Oil GPM	Pump Discharge Feet-Head	Motor HP	Full Load Amps 230V.3Ph/60Hz	Full Load Amps 460V.3Ph/60Hz
4470GX-50	45	13	7	6.7	0.38	1.9	1.13
4470GX-100	79	26	13	6.7	0.56	2.0	1.16
4470GX-150	122	39	20	6.7	0.70	2.6	1.48
4470GX-200	151	52	27	6.7	0.87	3.4	2.18
4470GX-250	185	66	33	6.7	1.21	4.3	2.48
4470GX-300	217	79	40	6.7	1.70	4.3	2.48
4470GX-400	285	105	53	6.7	2.13	5.8	3.38

Gallons: US

### Description

Fabric media filtration of liquid coolants from 100 to 5 micron, utilizing optimized gravity bed technology.

### Suitable for

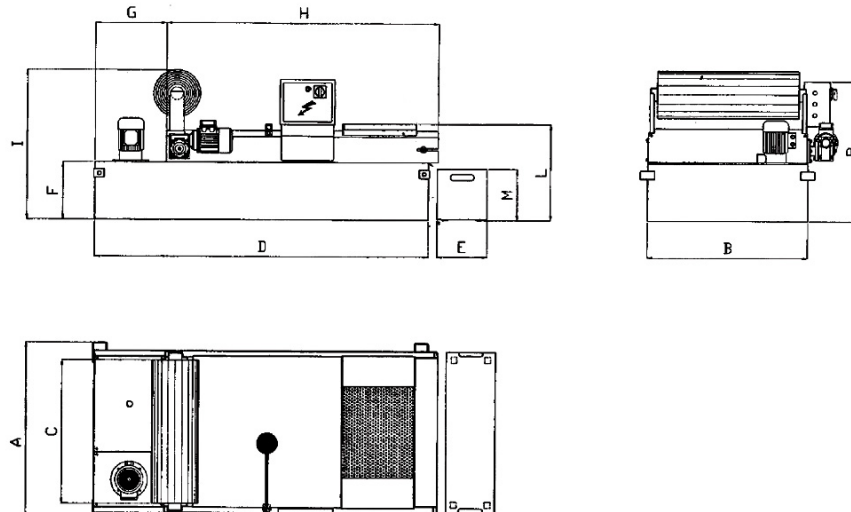
Grinding, Swiss-type screw machines, and fine metal machining processes as well as similar industrial applications.

### Application

Filtration of machine tool coolants or similar liquids with a maximum viscosity of 20 cSt (100 SSU) at 38°C (100° F)

### Option

Stainless steel construction for filtering “water” applications such as de-burring machines, part washers and some food industry applications. It can also be utilized to filter some mildly corrosive and alkaline fluids.



DIMENSIONS IN INCHES

4470GX	4470GX-50	4470GX-100	4470GX-150	4470GX-200	4470GX-250	4470GX-300	4470GX-400
A	30.4	38.3	50.4	50.4	50.4	50.4	50.4
B	23.4	31.2	43.0	43.0	43.0	43.0	43.0
C	19.7	27.6	39.4	39.4	39.4	39.4	39.4
D	49.2	65.0	72.8	90.6	110.2	129.9	169.3
E	9.8	9.8	9.8	9.8	9.8	9.8	9.8
F	11.0	11.0	11.0	11.0	11.0	11.0	11.0
G	13.8	13.8	13.8	13.8	13.8	13.8	13.8
H	39.4	53.1	61.0	78.7	98.4	118.1	157.5
I	29.5	29.5	29.5	29.5	29.5	29.5	29.5
L	17.3	17.3	17.3	17.3	17.3	17.3	17.3
M	9.8	9.8	9.8	9.8	9.8	9.8	9.8

## FILTER INSTALLATION GUIDELINES

### 4470GX MODELS

- √ Check that the discharge height from the machine tool or other application is greater than or equal to the height of the distribution trough of the 4470GX system.
- √ Position the dirty coolant or liquid feed pipe coming from the machine tool or other application into the distribution trough. If this pipe is flexible, check that there are no flow restrictions or sagging.
- √ Through the rear inspection plate, fill the coolant tank with liquid up to a maximum liquid level of 1-2 inches below the top of the coolant tank.

### LIQUID CONNECTION

- √ The clean coolant or liquid being discharged from the pump will need to be connected back to the machine tool or associated application with appropriate connectors and piping or hose.

### ELECTRICAL CONNECTIONS

- √ Check that the incoming connection voltage is the same as the coolant filter voltage.
- √ For the proper electrical connection of the coolant filter please refer to the wiring diagram provided in the instruction manual.

### PACKING DIMENSIONS AND WEIGHT

4470GX	4470GX-50	4470GX-100	4470GX-150	4470GX-200	4470GX-250	4470GX-300	4470GX-400
Crate In.	37 x 61 x 34	46 x 75 x 34	58 x 83 x 34	58 x 101 x 36	58 x 120 x 36	58 x 140 x 36	58 x 179 x 36
Gross Shipping Weight LBS	297	440	628	716	837	936	1145
Net Unit Weight LBS	198	297	429	518	605	683	837

### Extended Media Life

The ChipMaster 4470GM Series combines magnetic disc and disposable media filtration. This combination is an excellent way to extend filter media life when filtering coolant with ferrous metal chips. The 4470GM Series, is offered in seven (7) standard models with filtration capacities from 10gpm to 100gpm for water soluble coolant and from 5gpm to 50gpm for cutting oil.

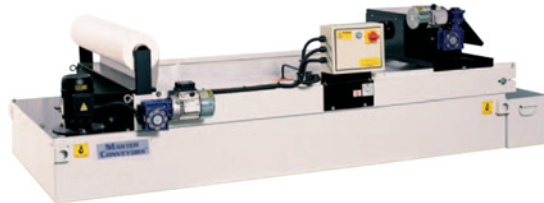
#### APPLICATIONS

Applications for the ChipMaster 4470GM include: grinding, honing, metal finishing, and fine metal machining processes producing a large amount of chips. Fluid compatibility includes water, water emulsion, and cutting oil with a maximum viscosity of 20cSt at 100 degrees F.

### Features:

- Fully automatic operation
- Magnetic separator
- Steel swarf hopper
- Roll of media
- Immersed pump

### Gravity Bed / Magnetic Separator Filtration Systems



#### Sequence of Operation

Dirty coolant is fed to the first stage magnetic disc pre-filter where ferrous metal chips and fines are collected. Coolant flows out of the Magnetic separator onto the filter media and into the clean tank where an immersed pump delivers the clean coolant back to the machining process. The filtering media is fully supported by the strainer bed that automatically advances the media when it loses filtering capacity. Metal chips, fines and spent media are collected in the hopper.

#### SPECIFICATIONS

Model	Tank Capacity Gallons	Flow Rate Soluable Oil GPM	Flow Rate Neat Oil GPM	Pump Discharge Feet-Head	Motor HP	Full Load Amps 230V.3Ph/60Hz	Full Load Amps 460V.3Ph/60Hz
4470GM-50	45	13	7	6.7	0.38	2.9	1.71
4470GM-100	79	26	13	6.7	0.56	3.0	1.74
4470GM-150	122	39	20	6.7	0.70	3.6	2.06
4470GM-200	151	52	27	6.7	0.87	4.7	2.56
4470GM-250	185	66	33	6.7	1.21	5.3	3.06
4470GM-300	217	79	40	6.7	1.70	5.3	3.06
4470GM-400	285	105	53	6.7	2.13	6.8	3.96

Gallons: US

### Description

Filtration of magnetic and non-magnetic particles from liquid coolants utilizing two-stage filtration technology; magnetic discs, and fabric media providing 100 to 5 micron removal.

### Suitable for

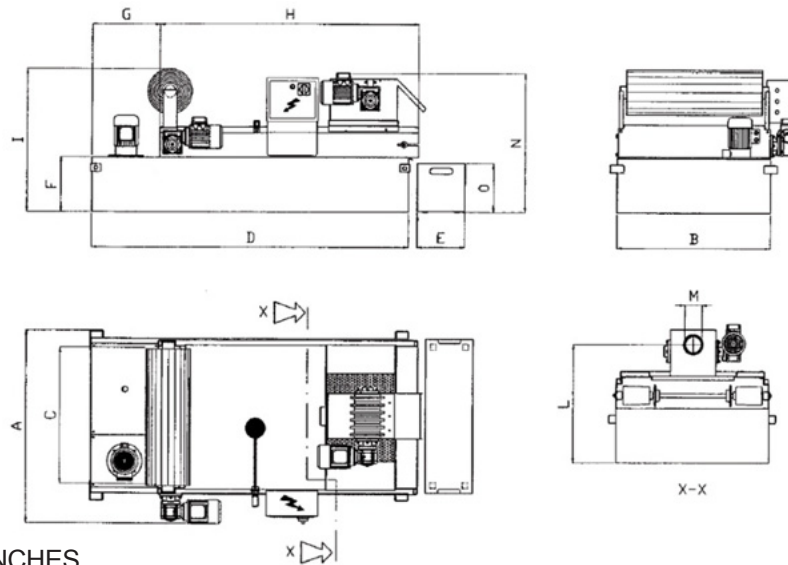
Grinding, metal machining processes, and similar industrial applications where heavy ferrous particulate is present.

### Application

Filtration of machine tool coolants or similar liquids with a maximum viscosity of 20 cSt (100 SSU) at 38°C (100° F) containing magnetic and non-magnetic particles.

### Option

Stainless Steel construction for filtering “water” applications such as de-burring machines, part washers and some food industry applications. It can also be utilized in some mildly corrosive and alkaline applications



DIMENSIONS IN INCHES

4470GM	4470GM-50	4470GM-100	4470GM-150	4470GM-200	4470GM-250	4470GM-300	4470GM-400
A	30.4	38.3	50.4	50.4	50.4	50.4	50.4
B	23.4	31.2	43.0	43.0	43.0	43.0	43.0
C	19.7	27.6	39.4	39.4	39.4	39.4	39.4
D	49.2	65.0	72.8	90.6	110.2	129.9	169.3
E	9.8	9.8	9.8	9.8	9.8	9.8	9.8
F	11.0	11.0	11.0	11.0	11.0	11.0	11.0
G	13.8	13.8	13.8	13.8	13.8	13.8	13.8
H	39.4	53.1	61.0	78.7	98.4	118.1	157.5
I	29.5	29.5	29.5	29.5	29.5	29.5	29.5
L	23.6	23.6	23.6	23.6	23.6	23.6	23.6
M	3.0	3.0	3.0	3.0	3.0	3.0	3.0
N	17.3	17.3	17.3	17.3	17.3	17.3	17.3
O	9.8	9.8	9.8	9.8	9.8	9.8	9.8

## COOLANT INSTALLATION GUIDELINES

### ChipMaster 4470GM Model

- √ Check that the discharge height from the machine tool or other application is greater than or equal to the inlet height of the filter system.
- √ Position the dirty coolant or liquid feed pipe coming from the machine tool or other application into the coupling welded on the back of the disc separator. If this pipe is flexible, check that there are no flow restrictions or sagging.
- √ Through the rear inspection plate, fill the coolant tank with liquid up to a maximum liquid level of 1-2 inches below the top of the coolant tank.

### LIQUID CONNECTION

- √ The clean coolant or liquid being discharged from the pump will need to be connected back to the machine tool or associated application with appropriate connectors and piping or hose.

### ELECTRICAL CONNECTIONS

- √ Check that the incoming connection voltage is the same as the coolant filter voltage.
- √ For the proper electrical connection of the coolant filter please refer to the wiring diagram provided in the instruction manual. Additional information concerning the installation or operation of these coolant filters is also provided in the instruction manual for the ChipMaster 4470GX, 4470GM and 4470XM series.

## PACKING DIMENSIONS AND WEIGHT

4470GM	4470GM50	4470GM100	4470GM150	4470GM200	4470GM250	4470GM300	4470GM400
Crate In.	38 x 61 x 34	46 x 75 x 34	58 x 83 x 34	58 x 101 x 36	58 x 120 x 36	58 x 140 x 36	58 x 179 x 36
Gross Shipping Weight LBS	363	535	716	870	980	1145	1487
Net Unit Weight LBS	264	385	551	650	738	914	1156

## Magnetic Filtration

The ChipMaster 4470XM Series Magnetic Separator filter utilizes magnetic discs to separate ferrous particles from grinding, metal machining processes and similar industrial applications. The 4470XM Series Separators are available in seven (7) standard models, with flow rates from 10gpm to 100gpm using water soluble coolant

### Applications

The ChipMaster 4470XM is only suitable for filtering coolant used with ferrous chips and contamination. Compatible with water soluble and cutting oil fluids with a maximum viscosity of 20 cSt at 100 degree F. the rotating magnetic discs provide excellent removal of ferrous particles due to their high surface area and slow rotation. These units have a low operating cost and do not use disposable media.

## Magnetic Separator Filtration Systems



### Principle of Operation

The dirty coolant is fed to the coupling on the back of the magnetic separator. The rotating magnetic discs collect the ferrous chips and fines as the coolant passes into the clean tank below. Clean coolant is pumped back to the process via the immersed pump located in the clean tank, Chips and fines are transferred from the discs to the chute and into the swarf hopper.

### Description

Separation of magnetic particles from liquid coolants utilizing optimized magnetic disc technology.

### Suitable for

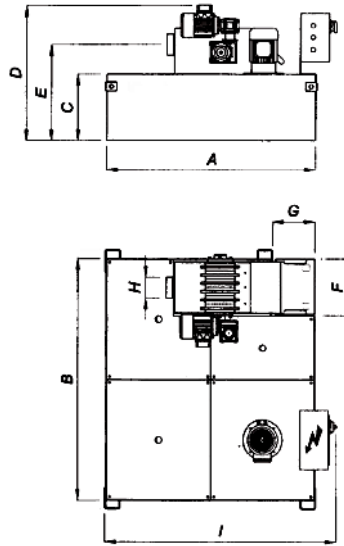
Grinding, metal machining processes, and similar industrial applications where heavy ferrous particulate is present.

### Application

Separation of magnetic particles from machine tool coolants or similar liquids with a maximum viscosity of 20 cSt at 100° F.

Model	Tank Capacity Gallons	Flow Rate Soluble Oil GPM	Flow Rate Neat Oil GPM	Pump Discharge Feet-Head	Motor HP	Full Load Amps 230V.3Ph/60Hz	Full Load Amps 460V.3Ph/60Hz
4470XM-50	41	13.2	6.6	6.7	0.38	1.9	1.13
4470XM-100	78	26.4	13.2	6.7	0.56	2.0	1.16
4470XM-150	116	39.6	19.8	6.7	0.70	2.6	1.48
4470XM-200	159	52.8	26.4	6.7	0.87	3.4	2.18
4470XM-250	219	66.1	33	6.7	1.21	4.3	2.48
4470XM-300	264	79.3	40	6.7	1.70	4.3	2.48
4470XM-400	312	105.7	53	6.7	2.13	5.8	3.38

Gallons: US



### DIMENSIONS IN INCHES

4470XM	4470XM-50	4470XM-100	4470XM-150	4470XM-200	4470XM-250	4470XM-300	4470XM-400
A	31.5	37.4	41.3	45.3	55.1	63.0	70.9
B	27.6	43.3	51.2	63.0	70.9	74.8	78.7
C	11.8	11.9	13.8	13.8	13.8	13.8	13.8
D	24.0	24.0	26.0	25.4	25.4	25.4	25.4
E	18.1	18.1	20.1	19.5	19.5	19.5	19.5
F	7.9	10.2	14.2	17.3	20.5	26.4	33.9
G	7.9	7.9	9.8	9.8	9.8	9.8	9.8
H	3.0	3.0	3.0	3.0	3.0	3.0	3.0
I	33.1	39.0	42.9	46.9	56.7	64.6	72.4

### PACKING DIMENSIONS AND WEIGHT

4470XM	4470XM-50	4470XM-100	4470XM-150	4470XM-200	4470XM-250	4470XM-300	4470XM-400
Crate In.	40 x 36 x 32	46 x 52 x 32	50 x 59 x 34	53 x 71 x 34	63 x 79 x 34	71 x 83 x 34	79 x 87 x 34
Gross Shipping Weight LBS	286	452	650	815	1079	1377	1608
Net Unit Weight LBS	209	352	529	694	914	1156	1366

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