

## SFE Series In-Tank Suction Strainer Element



### Description

HYDAC Suction Strainer Elements are designed for installation into suction lines of pumps. Extra caution should be taken to ensure that the suction elements are always mounted below the minimum oil level of the reservoir.

The suction strainer elements can be supplied with a bypass valve to reduce high pressure drops caused by contaminated elements or high viscosity fluids during cold starting. The bypass valve opens at 3 psi. For best results, suction strainer elements should be sized for clean element pressure drops of no higher than 0.5 to 0.7 psi.

HYDAC suction Strainer Elements are manufactured using stainless steel wire screen media, plastic nut cap, and nickel-coated steel end cap.

Suction strainer elements are only intended to protect hydraulic pumps against catastrophic failure caused by coarse contaminant.

Suction strainer elements should be inspected and cleaned regularly.

Suction strainer elements should not be used as the only filtration elements in a hydraulic system. Pressure filters and return line filters, with reasonable dirt holding capacity, must be installed to provide protection against component damage caused by fine contaminants.

### Cleaning Procedure

Remove external build-up of contaminant with cleaning fluid in separate tank.

Flush element with clean solvent and blow through wire screen media with air.

### Model Code

**SFE 11 G 125 A 1 .0 /**

Type of Element \_\_\_\_\_

SFE = In-Tank Suction Strainer Element

Size \_\_\_\_\_

<i>11</i>	=	<i>3 gpm</i>	100	=	30 gpm
15	=	5 gpm	180	=	50 gpm
25	=	8 gpm	<i>280</i>	=	<i>75 gpm</i>
50	=	10 gpm	<i>380</i>	=	<i>100 gpm</i>
<i>80</i>	=	<i>20 gpm</i>			

Type of Connection \_\_\_\_\_

G = NPT Threaded Connection

Nominal Filtration Rating (micron) \_\_\_\_\_

125	=	149 µm	—	100 Mesh Screen
<i>74</i>	=	<i>74 µm</i>	—	<i>200 Mesh Screen</i>

Clogging Indicator (not applicable) \_\_\_\_\_

A = No clogging indicator

Type Number \_\_\_\_\_

1

Modification Number (latest version always supplied) \_\_\_\_\_

.0

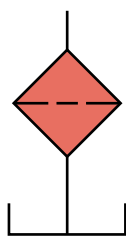
Bypass Valve \_\_\_\_\_

(omit) = Without Bypass-Valve

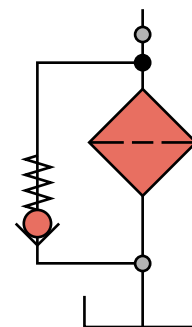
BYP = With Bypass Valve (3 psi) (not available for size 11)

*Model Codes containing selections listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability*

## Technical Data Hydraulic Symbols



Without Bypass-Valve



With Bypass-Valve

## Hydraulic Data

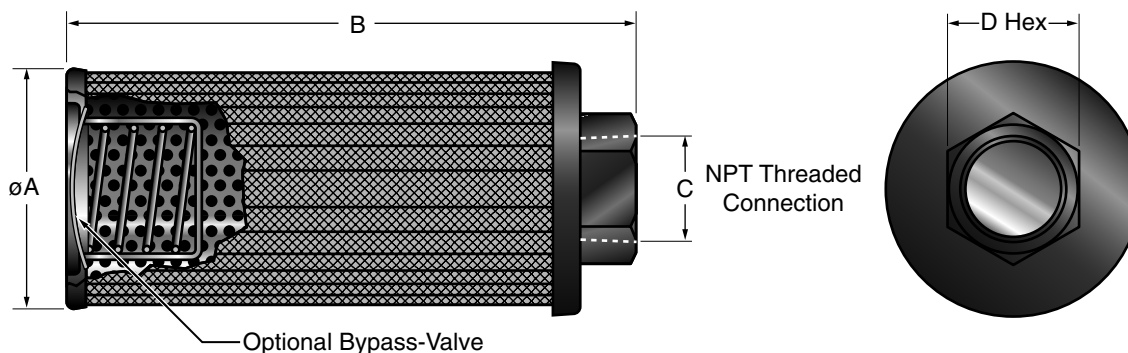
### Pressure Drop vs. Flow:

Pressure drop will be < 2 psi when strainers are used within the recommended flow range, and with a standard hydraulic fluid with a viscosity of 141 SSU and specific gravity of 0.86.

### Temperature:

15° to 180°F

## Dimensions

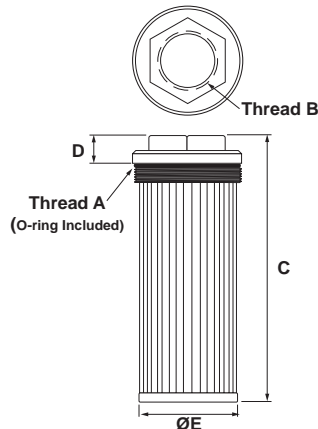


Size	Nominal Flow (gpm)	ØA (Inches)	B (Inches)	C (NPT)	D HEX (Inches)	Media Area (Sq. Inches)
SFE 11	3	1.33	2.62	3/8	1.188	3
SFE 15	5	1.95	4.19	1/2	1.00	16
SFE 25	8	2.67	3.55	3/4	1.31	50
SFE 50	10	2.67	5.25	1	1.62	90
SFE 80	20	3.39	6.62	1 1/4	2.00	135
SFE 100	30	3.39	8.76	1 1/2	2.38	195
SFE 180	50	4.03	9.88	2	2.78	230
SFE 280	75	5.19	10.25	2 1/2	3.38	325
SFE 380	100	5.19	11.53	3	3.81	410

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

## HTMS Series Tank Mounted Suction Strainer Elements

### SAE O-Ring

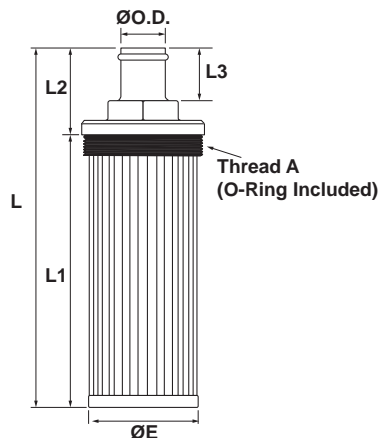


#### Model Code:

Series **HTMS** **SAE** **16** **100**  
 Thread Type \_\_\_\_\_  
 Thread B Size \_\_\_\_\_  
 Mesh Size \_\_\_\_\_  
 100 Mesh (149 micron)  
 Options \_\_\_\_\_  
 (omit) = Standard (no bypass)  
 RV3 = 3 PSI bypass Valve

Model Code	P/N	Per SAEJ514		Hex Size	GPM	Screen Area (Sq. In.)	Dimensions		
		THD A	THD B				C	D	ØE
<i>HTMS SAE 16 100</i>	<i>02078472</i>	2-1/2"-12	1-5/16"-12	2.13	9	90	9.00"	0.75"	2.24"
<i>HTMS SAE 20 100</i>	<i>02078473</i>	2-1/2"-12	1-5/8"-12	2.13	14	90	9.00"	0.75"	2.24"
<i>HTMS SAE 24 100</i>	<i>02078474</i>	3-3/8"-12	1-7/8"-12	2.50	21	230	8.80"	0.90"	3.22"
<i>HTMS SAE 32 100</i>	<i>02078475</i>	3-3/8"-12	2-1/2"-12	3.00	39	230	9.30"	0.98"	3.22"

### Hose Barb

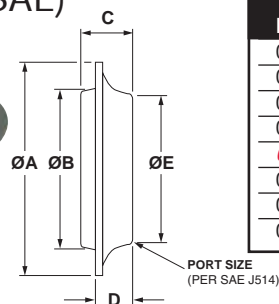


#### Model Code:

Series **HTMS** **HB** **1/1.25** **100**  
 Connection Type \_\_\_\_\_  
 Connection / Hex Size \_\_\_\_\_  
 Mesh \_\_\_\_\_  
 100 Mesh (149 micron)  
 Options \_\_\_\_\_  
 (omit) = Standard (no bypass)  
 RV3 = 3 PSI Bypass Valve

Model Code	P/N	Thread A	Ø O.D.	Hex Size	Dimensions				
					L	L1	L2	L3	ØE
<i>HTMS HB 1/1.25 100</i>	<i>02078485</i>	1-7/8"-12	1.00"	1.25"	9.30"	7.30"	2.00"	1.25"	1.65"
<i>HTMS HB 1.25/1.5 100</i>	<i>02078486</i>	2-1/2"-12	1.25"	1.50"	10.00"	8.00"	2.00"	1.25"	2.12"
<i>HTMS HB 1.5/2 100</i>	<i>02078487</i>	3-3/8"-12	1.50"	2.00"	10.30"	7.82"	2.48"	1.50"	3.22"
<i>HTMS HB 2/2.5 100</i>	<i>02078488</i>	3-3/8"-12	2.00"	2.50"	10.80"	7.84"	2.97"	2.00"	3.22"

### Weld Flange (SAE)



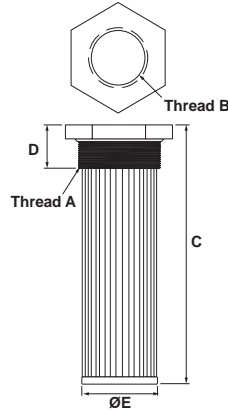
Part No.	Model Code	Port Size	Dimensions				
			ØA	ØB	C	D	ØE
02078493	HTMS TWF-6	9/16"-18	1.50"	0.93"	0.56"	0.31"	1.00"
02078494	HTMS TWF-8	3/4"-16	1.50"	0.93"	0.56"	0.31"	1.00"
02078495	HTMS TWF-12	1-1/16"-12	2.13"	1.38"	0.69"	0.44"	1.44"
02078496	HTMS TWF-16	1-5/16"-12	2.38"	1.66"	0.75"	0.50"	1.75"
<i>02078497</i>	<i>HTMS TWF-20</i>	1-5/8"-12	2.69"	2.00"	0.75"	0.50"	2.13"
02078482	HTMS TWF-24	1-7/8"-12	3.00"	2.25"	0.75"	0.50"	2.38"
02078483	HTMS TWF-32	2-1/2"-12	3.50"	2.63"	0.84"	0.59"	2.88"
02078484	HTMS TWF-48	3-3/8"-12	4.63"	3.66"	1.00"	0.81"	3.94"

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.

Model Codes and Part numbers listed in red italics are non-standard items – Minimum quantities may apply – Contact HYDAC for information and availability

# Suction Strainers **HYDAC**

## NPT

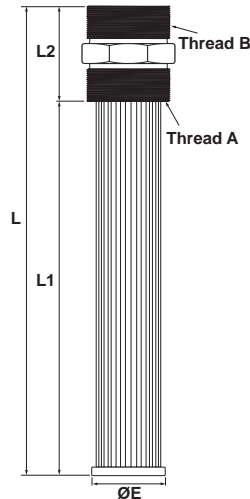


### Model Code:

Series HTMS NPT 1/2 100  
 Thread Type \_\_\_\_\_  
 Thread B Size \_\_\_\_\_  
 Mesh \_\_\_\_\_  
 100 Mesh (149 micron)  
 Options \_\_\_\_\_  
 (omit) = Standard (no bypass)  
 RV5 = 5 PSI Bypass Valve

Model Code	P/N	GPM	Screen Area (Sq. In.)	THD A	THD B	Hex Size	Dimensions		
							C	D	ØE
<i>HTMS NPT 1/2 100</i>	<i>02078460</i>	5	35	1" NPT	1/2" NPT	1.43	5.38"	1.10"	1.18"
<i>HTMS NPT 3/4 100</i>	<i>02078461</i>	10	64	1 1/4" NPT	3/4" NPT	1.81	7.50"	1.20"	1.14"
<i>HTMS NPT 1 100</i>	<i>02078462</i>	15	86	1 1/2" NPT	1" NPT	2.00	8.25"	1.30"	1.65"
<i>HTMS NPT 1 1/4 100</i>	<i>02078463</i>	25	125	2" NPT	1 1/4" NPT	2.55	10.00"	1.30"	2.12"
<i>HTMS NPT 2 100</i>	<i>02078464</i>	50	260	3" NPT	2" NPT	3.30	10.25"	1.70"	3.03"
<i>HTMS NPT 3 100</i>	<i>02078465</i>	100	315	4" NPT	3" NPT	5.00	11.30"	1.80"	3.78"

## Male NPT Ports



### Model Code:

Series HTMS NPTM 2 100  
 Thread Type \_\_\_\_\_  
 Thread B Size \_\_\_\_\_  
 Mesh Size \_\_\_\_\_  
 100 Mesh (149 micron)  
 Options \_\_\_\_\_  
 (omit) = Standard (no bypass)  
 RV3 = 3 PSI bypass Valve

Model Code	P/N	THD A	THD B	Hex Size	L	Dimensions		
						L1	L2	ØE
<i>HTMS NPTM 2 100</i>	<i>02078480</i>	2" NPT	2" NPT	2.75"	13.50"	10.75"	2.70"	2.12"

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## Magnetic Suction Separators

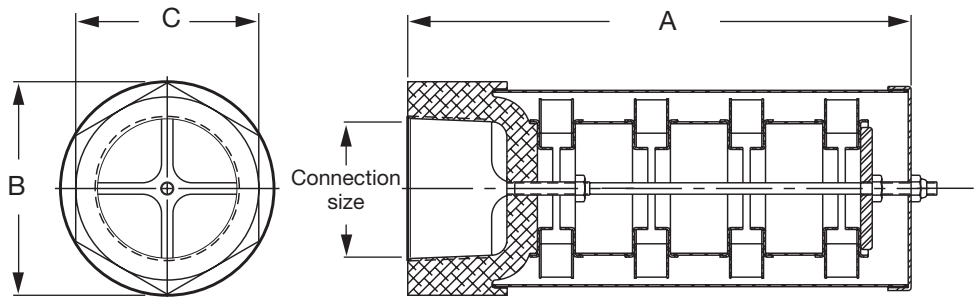
With the use of Hydac's Magnetic Suction Separators, suction line filtration is provided without starving the pump. They offer unique protection for pumps from all sizes of ferrous particles, some of which have the potential of destroying a pump in a single pass. Large ceramic magnets are spaced along the length of the separator. All hydraulic fluid entering the pump must move at low velocity through a powerful magnetic field. This field traps large quantities of micron ferrous particles. The viscous properties of the fluid can cause some non-ferrous particles to adhere to the magnetically trapped particles.

Hydac MSS's are available in sizes ranging from one to three inches. The chart below shows the part numbers, specifications, and dimensions of available models.



Standard  
outer screen

SS20  
Mesh screen



Complete Model Number	Connection Size	Max. Flow gpm (lpm)	$\Delta$ psi at Max. gpm	Dimensions (mm)		
				A	*B	C
MSS-1	1" NPT	15 (55)	0.05	5.25" (133)	3.25" (83)	1.62" (41)
MSS-1 1/4	1 1/4" NPT	25 (95)	0.05	8.25" (210)	3.50" (89)	3.00" (76)
MSS-1 1/2	1 1/2" NPT	35 (135)	0.08	8.25" (210)	3.50" (89)	3.00" (76)
MSS-2	2" NPT	50 (190)	0.10	8.25" (210)	3.50" (89)	3.00" (76)
MSS-3	3" NPT	100 (380)	0.02	10" (254)	3.50" (89)	4.00" (102)

\* 'B' Dimension larger for SS20 versions

Dimensions are for general information only, all critical dimensions should be verified by requesting a certified print.  
Dimensions are in inches/(mm) and lbs./kg.)

The standard outer screen has adequate open area (0.079 inch diameter perforations) to eliminate the possibility of pump starvation. All models are also available with a pleated 20 mesh screen (850 micron) by adding SS20 to the model number. (Example MSS-1 SS20).

All units have a removeable outer screen that can be cleaned and re-used to extend service life and minimize pressure drop.