

SUCTION STRAINERS

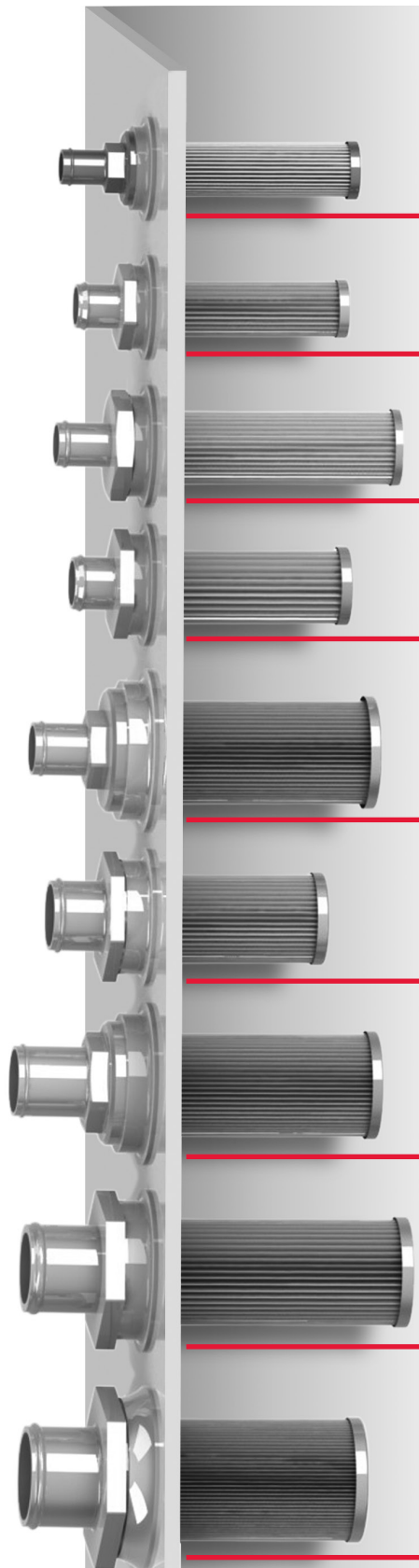
SFE In-Tank



	Size	Nominal flow* (gpm)	Connection NPT	Overall Length	Bypass
	SFE 11	3	3/8"	2.7"	N/A
	SFE 15	5	1/2"	4.2"	Optional
	SFE 25	8	3/4"	2.7"	Optional
	SFE 50	10	1"	2.7"	Optional
	SFE 80	20	1 1/4"	3.5"	Optional
	SFE 100	30	1 1/2"	3.5"	Optional
	SFE 180	50	2"	4.0"	Optional
	SFE 280	75	2 1/2"	5.2"	Optional
	SFE 380	100	3"	5.2"	Optional

*Flow ratings listed are nominal flow ratings for typical applications. High velocity/ low temperature applications may require a strainer with a high flow rating. Consult HYDAC Engineering for more information. These strainers are in-tank mounted with NPT ports. Materials are plastic nut caps, stainless steel wire cloth, and plated steel support tubes and end caps.

HTMS Hose Barb



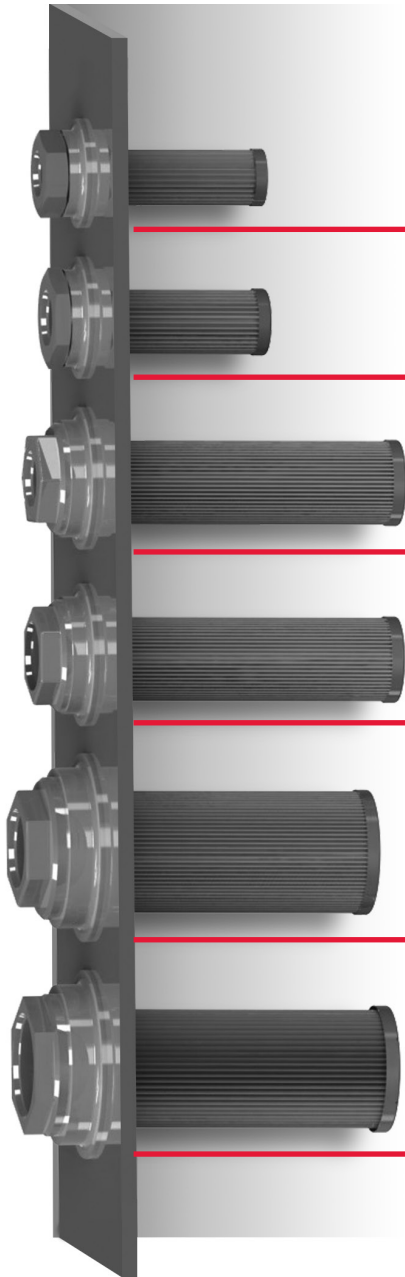
	Size	Nominal flow* (gpm)	Connect. Pump Side	Connect. Tank Side	Overall Length	Install Length	Bypass
	1" HB / SAE-24	8	1" HB	1-7/8"-12	9.3"	7.3"	Optional
	1.25" HB / SAE-24	12	1.25" HB	1-7/8"-12	8.5"	6.9"	N/A
	1.25" HB / SAE-32	15	1.25" HB	2-1/2"-12	10.5"	8.5"	Optional
	1.5" HB / SAE-32	20	1.5" HB	2-1/2"-12	8.5"	6.9"	N/A
	1.5" HB / SAE-48	25	1.5" HB	3-3/8"-12	10.3"	7.8"	Optional
	2" HB / SAE-40	30	2" HB	2-7/8"-12	8.2"	6.3"	N/A
	2" HB / SAE-48	40	2" HB	3-3/8"-12	10.7"	7.7"	Optional
	2.5" HB / SAE-48	50	2.5" HB	3-3/8"-12	11.1"	8.5"	N/A
	3" HB / SAE-48	75	3" HB	3-3/8"-12	9.7"	7.1"	N/A

*Flow ratings listed are nominal flow ratings for typical applications. High velocity/ low temperature applications may require a strainer with a high flow rating. Consult HYDAC Engineering for more information.

These strainers are externally mounted with SAE threaded tank connection. Materials are plated steel or aluminum nut caps, stainless steel wire cloth, and plated steel support tubes and end caps.

SUCTION STRAINERS









HTMS SAE



	Size	Nominal flow* (gpm)	Connect. Pump Side	Connect. Tank Side	Overall Length	Install Length	Bypass
	SAE-12 / SAE-20	5	1-1/16"-12	1-5/8"-12	5.5"	4.9"	Optional
	SAE-16 / SAE-24	7	1-5/16"-12	1-7/8"-12	5.4"	5.0"	N/A
	SAE-16 / SAE-32	9	1-5/16"-12	2-1/2"-12	9"	8.3"	Optional
	SAE-20 / SAE-32	14	1-5/8"-12	2-1/2"-12	9"	8.3"	Optional
	SAE-24 / SAE-48	21	1-7/8"-12	3-3/8"-12	8.8"	7.8"	Optional
	SAE-32 / SAE-48	39	2-1/2"-12	3-3/8"-12	9.2"	8.3"	Optional

*Flow ratings listed are nominal flow ratings for typical applications. High velocity/low temperature applications may require a strainer with a high flow rating. Consult HYDAC Engineering for more information. These strainers are externally mounted with SAE threaded tank connection. Materials are plated steel or aluminum nut caps, stainless steel wire cloth, and plated steel support tubes and end caps.

Weld Flange

SAE 6	SAE 8	SAE 12	SAE 16	SAE 20	SAE 24	SAE 32	SAE 48
9/16"-18	3/4"-16	1-1/16"-12	1-15/16"-12	1-5/8"-12	1-7/8"-12	2-1/2"-12	3-3/8"-12
							
2078493	2078494	2078495	2078496	2078497	2078482	2078483	2078484

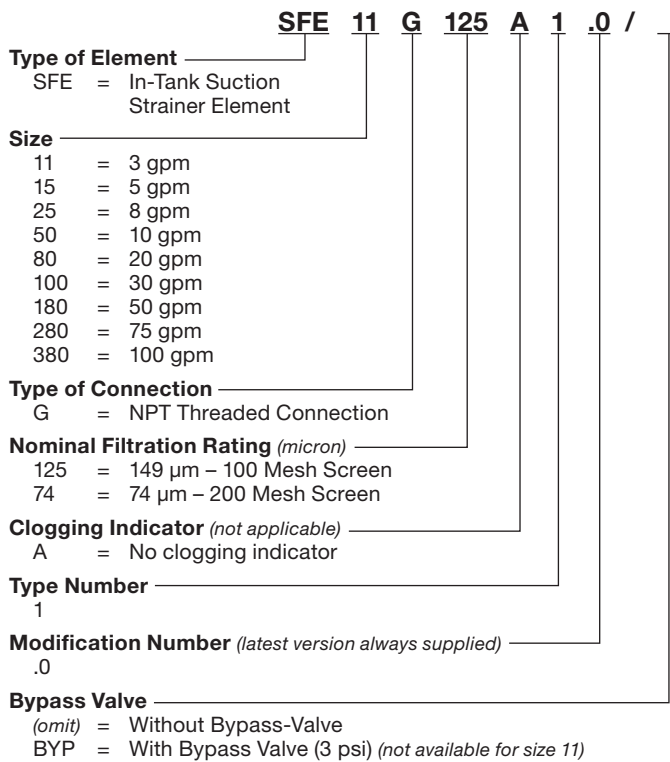
For use with HTMS Hose Barb and SAE Strainers. Materials are low carbon steel suitable for all welding techniques.

SFE Series

In-Tank Suction Strainer Element



Model Code



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 caps, and plated steel end caps and support tubes.

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.

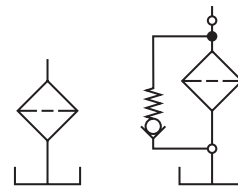
Hydraulic Data

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:

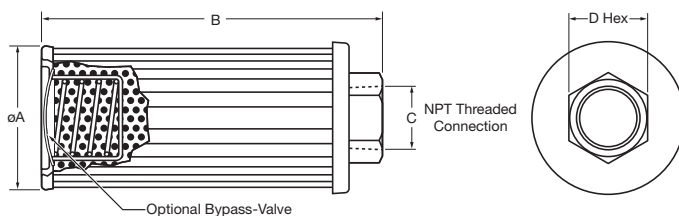
- 15° to 180°F (-9° to 82°C)



Without Bypass-Valve

With Bypass-Valve

Dimensions



Size	Nominal Flow (gpm)	ØA	B	C (NPT)	D HEX	Media Area (sq. in.)
SFE 11	3	1.95	2.68	3/8	1.00	15
SFE 15	5	1.95	4.19	1/2	1.00	25
SFE 25	8	2.67	3.55	3/4	1.43	50
SFE 50	10	2.67	5.25	1	1.62	90
SFE 80	20	3.47	6.62	1 1/4	2.00	135
SFE 100	30	3.47	8.01	1 1/2	2.38	195
SFE 180	50	4.03	9.88	2	2.78	260
SFE 280	75	5.19	10.25	2 1/2	3.25	325
SFE 380	100	5.19	11.75	3	3.75	410

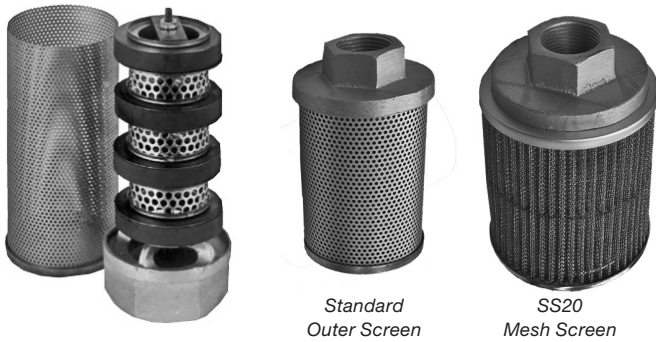
Notes:

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SUCTION STRAINERS

MSS Series

Magnetic Suction Separators



Description

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 micronic ferrous particles. The viscous properties of the fluid can cause some non-ferrous particles to adhere to the magnetically trapped particles.

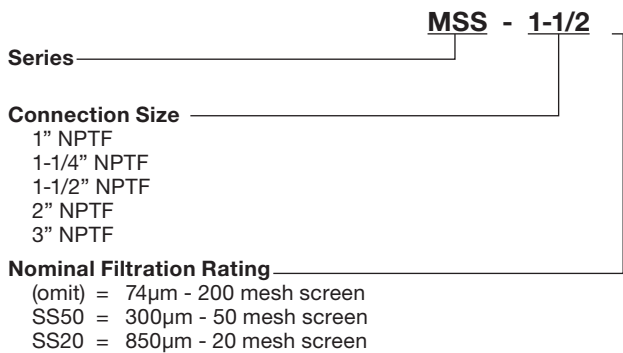
The MSS series is available in sizes ranging from one to three inches. The chart below shows the part numbers, specifications, and dimensions of available models.

The standard outer screen has adequate open area (0.079 inch diameter perforations) to eliminate the possibility of pump starvation.

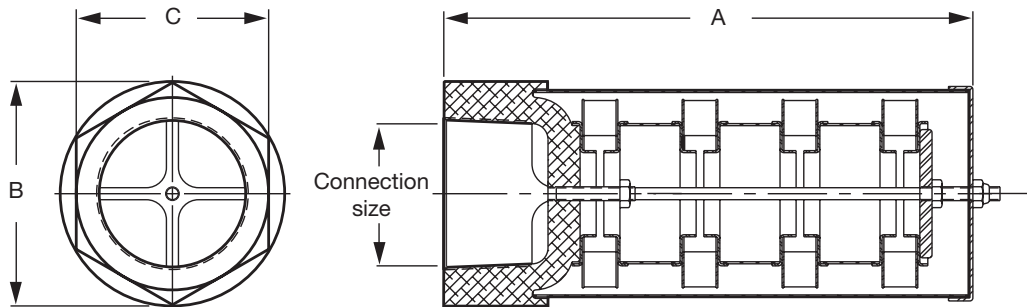
All models are also available with a pleated 20 mesh screen (850 μ) by adding SS20 to the model number. (Example MSS-1 SS20).

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

Model Code



Dimensions



Model Number	Part No.	Connection Size	Max. Flow gpm (lpm)	Δ psi at Max. gpm	Dimensions		
					A	B*	C
MSS-1	02082431	1" NPT	15 (55)	0.05	5.25" (133)	3.25" (83)	1.62" (41)
MSS-1 1/4	02082432	1 1/4" NPT	25 (95)	0.05	8.25" (210)	3.50" (89)	3.00" (76)
MSS-1 1/2	02082433	1 1/2" NPT	35 (135)	0.08	8.25" (210)	3.50" (89)	3.00" (76)
MSS-2	02082434	2" NPT	50 (190)	0.10	8.25" (210)	3.50" (89)	3.00" (76)
MSS-3	02082435	3" NPT	100 (380)	0.02	10" (254)	3.50" (89)	4.00" (102)

*B Dimension larger for SS20 versions

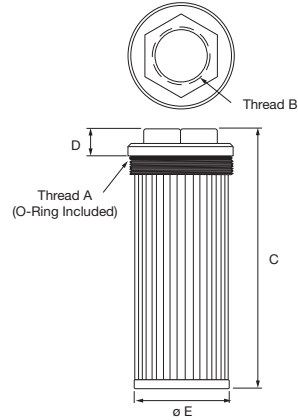
Notes:

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HTMS Series

Tank Mounted Suction Strainer Elements
SAE O-Ring

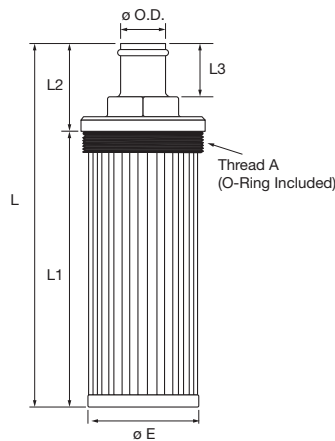


Model Code

Series **HTMS**
 Thread Type **SAE**
 Thread B Size **16**
 Mesh Size **100**
 100 = 100 Mesh (149 micron)
 Options
 (omit) = Standard (no bypass)
 RV3 = 3 psi bypass valve

Model Code	Part No.	Per SAEJ514		Hex Size	GPM*	Screen Area (Sq. In.)	Dimensions		
		THD A	THD B				C	D	ØE
HTMS SAE 16 100	02078472	2-1/2"-12	1-5/16"-12	2.13	9	90	9.00"	0.75"	2.24"
HTMS SAE 20 100	02078473	2-1/2"-12	1-5/8"-12	2.13	14	90	9.00"	0.75"	2.24"
HTMS SAE 24 100	02078474	3-3/8"-12	1-7/8"-12	2.50	21	230	8.80"	0.90"	3.22"
HTMS SAE 32 100	02078475	3-3/8"-12	2-1/2"-12	3.00	39	230	9.30"	0.98"	3.22"

Hose Barb

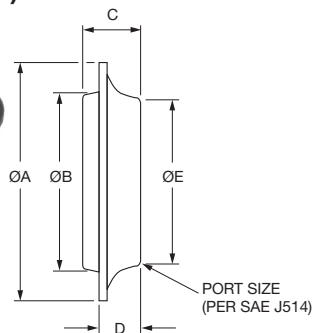


Model Code

Series **HTMS**
 Connection Type **HB**
 Connection / Hex Size **1/1.25**
 Mesh **100**
 100 = 100 Mesh (149 micron)
 Options
 (omit) = Standard (no bypass)
 RV3 = 3 psi bypass valve

Model Code	Part No.	Thread A	ø O.D.	Hex Size	GPM*	Dimensions				
						L	L1	L2	L3	ø E
HTMS HB 1 / SAE 24 100	02078485	1-7/8"-12	1.00"	1.25"	8	9.30"	7.30"	2.00"	1.25"	1.65"
HTMS HB 1.25 / SAE 32 100	02078486	2-1/2"-12	1.25"	1.50"	14	10.00"	8.00"	2.00"	1.25"	2.12"
HTMS HB 1.5 / SAE 48 100	02078487	3-3/8"-12	1.50"	2.00"	21	10.30"	7.82"	2.48"	1.50"	3.22"
HTMS HB 2 / SAE 48 100	02078488	3-3/8"-12	2.00"	2.50"	40	10.80"	7.84"	2.97"	2.00"	3.22"

Weld Flange (SAE)



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

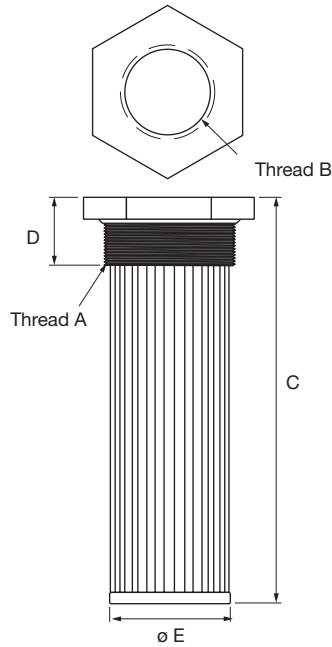
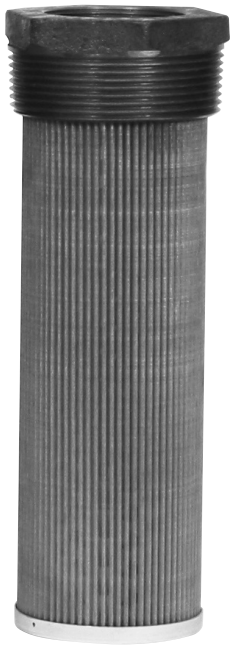
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Notes:

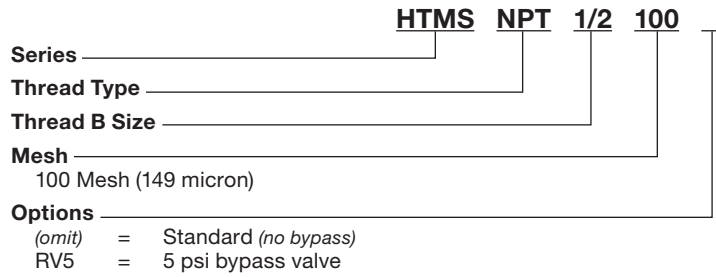
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SUCTION STRAINERS

NPT

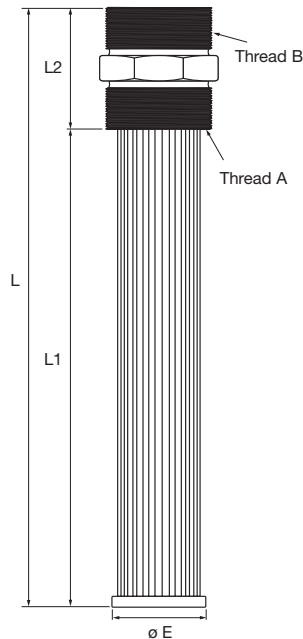
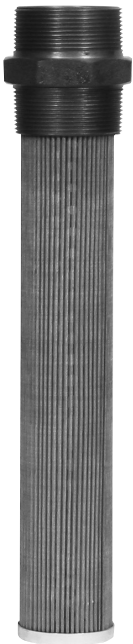


Model Code

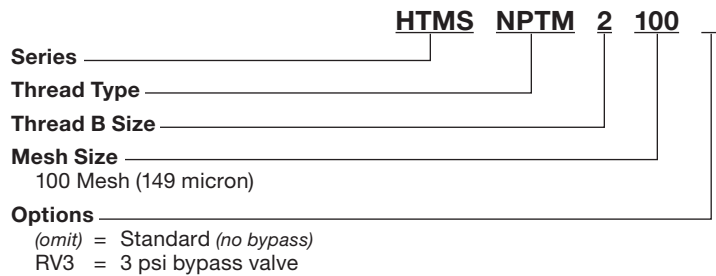


Model Code	Part No.	GPM*	Screen Area (Sq. In.)	THD A	THD B	Hex Size	Dimensions		
							C	D	ø E
HTMS NPT 1/2 100	02078460	5	35	1" NPT	1/2" NPT	1.43	5.38"	1.10"	1.18"
HTMS NPT 3/4 100	02078461	10	64	1 1/4" NPT	3/4" NPT	1.81	7.50"	1.20"	1.14"
HTMS NPT 1 100	02078462	15	86	1 1/2" NPT	1" NPT	2.00	8.25"	1.30"	1.65"
HTMS NPT 1 1/4 100	02078463	25	125	2" NPT	1 1/4" NPT	2.55	10.00"	1.30"	2.12"
HTMS NPT 2 100	02078464	50	260	3" NPT	2" NPT	3.30	10.25"	1.70"	3.03"
HTMS NPT 3 100	02078465	100	315	4" NPT	3" NPT	5.00	11.30"	1.80"	3.78"

Male NPT Ports



Model Code



Model Code	Part No.	GPM*	THD A	THD B	Hex Size	Dimensions			
						L	L1	L2	ø E
HTMS NPTM 2 100	02078480	50	2" NPT	2" NPT	2.75"	13.50"	10.75"	2.70"	2.12"

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