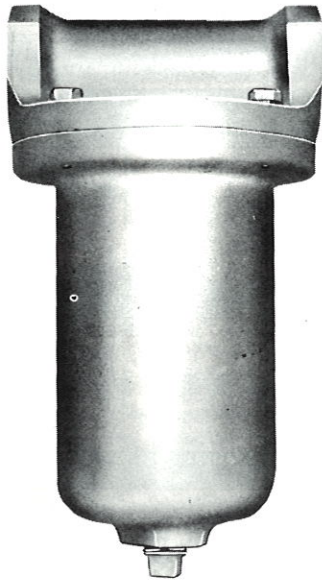


**1300 SERIES - FOR SUCTION, RETURN AND LOW PRESSURE LINES**

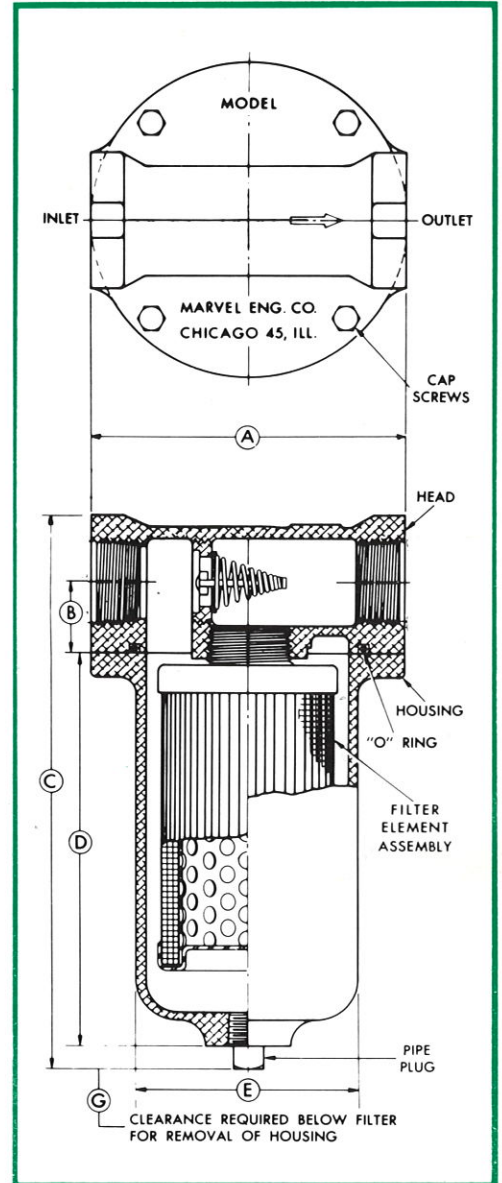
**For Use With Water or Special Fluids**



(For gallon capacities see Note 1 on page 19)

**BRASS HEAD AND HOUSING — ALL STAINLESS STEEL WIRE CLOTH FILTER ELEMENT — ALL STAINLESS STEEL BY-PASS OPTIONAL.**

**CAPACITIES:** 10—20—30—50 and 75 G.P.M.  
**PIPE SIZES:** 1"—1¼"—1½"—2" and 2½".  
**BY-PASS VALVE:** Available with or without.  
**OPERATING PRESSURE:** Up to 250 p.s.i.  
**OPERATING TEMPERATURES:** Up to 275° F.



**ENGINEERING DATA—MOUNTING DIMENSIONS—PART NUMBERS**

CAPACITY	10 GPM	20 GPM	30 GPM	50 GPM	75 GPM
SIZE PORT	1" NPTF	1¼" NPTF	1½" NPTF	2" NPTF	2½" NPTF
Water @ 60° F	<b>PRESSURE DROP PSI</b>				
	.37	.52	.72	.89	1.25
	<b>APPROX. WT. LBS.</b>				
	8½	14	20	25½	37
A	<b>DIMENSIONS INCHES</b>				
	4.69	5.25	5.88	6.56	7.19
B	1.09	1.28	1.50	1.81	2.12
C	8.50	12.25	13.50	15.50	17.50
D	5.88	9.12	10.12	11.38	12.62
E	3.31	3.88	4.38	5.06	5.56
G	4.75	7.62	8.25	9.38	10.12

PORT SIZE	PART NUMBERS				
	1" NPTF	1¼" NPTF	1½" NPTF	2" NPTF	2½" NPTF
HOUSING	1310-1	1320-1	1330-1	1350-1	1375-1
HEAD WITHOUT BY-PASS	1310-2	1320-2	1330-2	1350-2	1375-2
HEAD WITH 3 PSI BY-PASS	1310-HB-2	1320-HB-2	1330-HB-2	1350-HB-2	1375-HB-2
HEAD WITH 5 PSI BY-PASS	1310-HB5-2	1320-HB5-2	1330-HB5-2	1350-HB5-2	1375-HB5-2
HEAD WITH 25 PSI BY-PASS	1310-HB25-2	1320-HB25-2	1330-HB25-2	1350-HB25-2	1375-HB25-2
#FILTER ELEMENT ASSEMBLY	1010-100	1020-100	1030-100	1050-100	1075-100
"O" RING	1510-3	1520-3	1530-3	1550-3	1575-3
NOMINAL SIZE	3½x3¼	4x3¾	4½x4¼	5¼x5	5¾x5½
DRAIN PIPE PLUG	1310-4	1320-4	1320-4	1350-4	1350-4
CAP SCREWS	1310-8	1320-8	1330-8	1350-8	1375-8

#100 MESH TYPE — USE MESH SIZES AS SUFFIX FOR OTHER MESH SIZES **EXAMPLE:** To order a 200 mesh element specify Element Number 1010-200 in place to 1010-100.



**MODEL NUMBERS—1300 SERIES LINE TYPE FILTERS SHOWN ON PAGE 18  
FOR WATER & SPECIAL FLUIDS**

BY-PASS	MESH	10 GPM	20 GPM	30 GPM	50 GPM	75 GPM
		1" NPTF	1 1/4" NPTF	1 1/2" NPTF	2" NPTF	2 1/2" NPTF
MODEL NUMBERS						
No	100*	1310-100	1320-100	1330-100	1350-100	1375-100
No	80	1310-80	1320-80	1330-80	1350-80	1375-80
No	60	1310-60	1320-60	1330-60	1350-60	1375-60
No	50	1310-50	1320-50	1330-50	1350-50	1375-50
No	40	1310-40	1320-40	1330-40	1350-40	1375-40
No	30	1310-30	1320-30	1330-30	1350-30	1375-30
No	20	1310-20	1320-20	1330-20	1350-20	1375-20
No	150	1310-150	1320-150	1330-150	1350-150	1375-150
No	200	1310-200	1320-200	1330-200	1350-200	1375-200
3 PSI	100*	1310-HB-100	1320-HB-100	1330-HB-100	1350-HB-100	1375-HB-100
3 PSI	80	1310-HB-80	1320-HB-80	1330-HB-80	1350-HB-80	1375-HB-80
3 PSI	60	1310-HB-60	1320-HB-60	1330-HB-60	1350-HB-60	1375-HB-60
3 PSI	50	1310-HB-50	1320-HB-50	1330-HB-50	1350-HB-50	1375-HB-50
3 PSI	40	1310-HB-40	1320-HB-40	1330-HB-40	1350-HB-40	1375-HB-40
3 PSI	30	1310-HB-30	1320-HB-30	1330-HB-30	1350-HB-30	1375-HB-30
3 PSI	20	1310-HB-20	1320-HB-20	1330-HB-20	1350-HB-20	1375-HB-20
5 PSI	100*	1310-HB5-100	1320-HB5-100	1330-HB5-100	1350-HB5-100	1375-HB5-100
5 PSI	80	1310-HB5-80	1320-HB5-80	1330-HB5-80	1350-HB5-80	1375-HB5-80
5 PSI	60	1310-HB5-60	1320-HB5-60	1330-HB5-60	1350-HB5-60	1375-HB5-60
5 PSI	50	1310-HB5-50	1320-HB5-50	1330-HB5-50	1350-HB5-50	1375-HB5-50
5 PSI	40	1310-HB5-40	1320-HB5-40	1330-HB5-40	1350-HB5-40	1375-HB5-40
5 PSI	30	1310-HB5-30	1320-HB5-30	1330-HB5-30	1350-HB5-30	1375-HB5-30
5 PSI	20	1310-HB5-20	1320-HB5-20	1330-HB5-20	1350-HB5-20	1375-HB5-20
25 PSI	100*	1310-HB25-100	1320-HB25-100	1330-HB25-100	1350-HB25-100	1375-HB25-100
25 PSI	80	1310-HB25-80	1320-HB25-80	1330-HB25-80	1350-HB25-80	1375-HB25-80
25 PSI	60	1310-HB25-60	1320-HB25-60	1330-HB25-60	1350-HB25-60	1375-HB25-60
25 PSI	50	1310-HB25-50	1320-HB25-50	1330-HB25-50	1350-HB25-50	1375-HB25-50
25 PSI	40	1310-HB25-40	1320-HB25-40	1330-HB25-40	1350-HB25-40	1375-HB25-40
25 PSI	30	1310-HB25-30	1320-HB25-30	1330-HB25-30	1350-HB25-30	1375-HB25-30
25 PSI	20	1310-HB25-20	1320-HB25-20	1330-HB25-20	1350-HB25-20	1375-HB25-20
3 PSI	150	1310-HB-150	1320-HB-150	1330-HB-150	1350-HB-150	1375-HB-150
3 PSI	200	1310-HB-200	1320-HB-200	1330-HB-200	1350-HB-200	1375-HB-200
5 PSI	150	1310-HB5-150	1320-HB5-150	1330-HB5-150	1350-HB5-150	1375-HB5-150
5 PSI	200	1310-HB5-200	1320-HB5-200	1330-HB5-200	1350-HB5-200	1375-HB5-200
25 PSI	150	1310-HB25-150	1320-HB25-150	1330-HB25-150	1350-HB25-150	1375-HB25-150
25 PSI	200	1310-HB25-200	1320-HB25-200	1330-HB25-200	1350-HB25-200	1375-HB25-200

\* 100 MESH STANDARD

NOTE (1): GPM capacities shown are maximum rating for suction applications only. For return and low pressure line applications, the filters may be used at 2 to 3 times the capacities shown depending upon allowable pressure drop.

NOTE (2): To specify MarvelMag Magnetic Rods in Filter, insert "M" in Model Number. Example: 1320-HB-100 becomes "1320-HBM100." To order Standard Replacement Element, specify No. 1020-100 (see part numbers—page 18). To order Element with Magnets, specify No. 1020M100. To order Replacement Element only, pleated for magnets but less the magnets, change "M" in Number to "MN", making it, in example "1020MN100."

**WHEN TO CLEAN FILTER**

A filter element condition indicator (such as the "Colorgage" Indicator, pages 26 & 27) is recommended for use with non-indicating filters to advise when cleaning is required. Caution: Make sure the operating fluid is compatible with Colorgage. If no indicator is used, proper maintenance of non-indicating filter becomes more difficult and must be based on trial and error guesswork methods, bearing in mind the following considerations:

Frequency of filter cleaning varies and is dependent upon the conditions under which equipment is operating. Recommended procedure is to establish a filter maintenance schedule based on your experience. Once this schedule is established, it should be adhered to without deviation. The little time required to clean the filter pays off in the efficient operation of your equipment and provides constant protection to the hydraulic system.



**1500 SERIES - FOR SUCTION, RETURN AND LOW PRESSURE LINES**

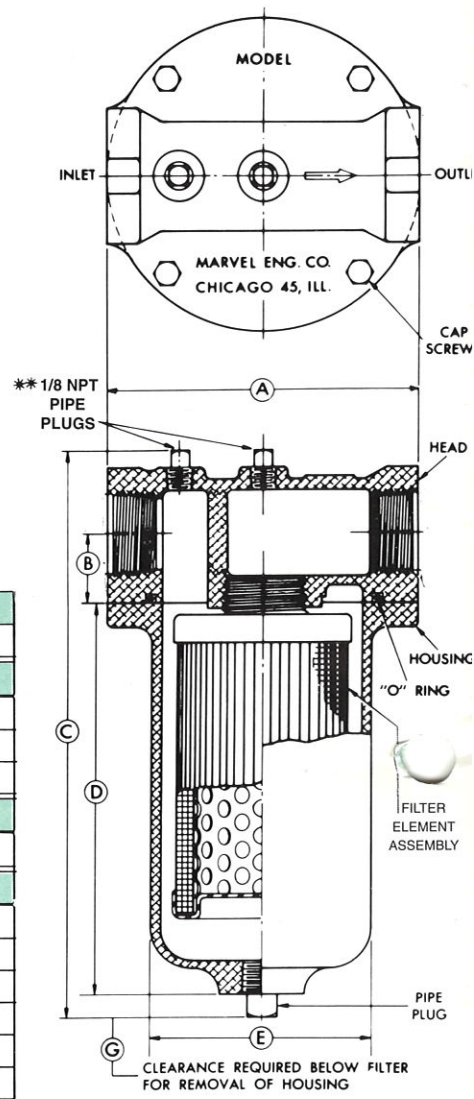


For use with regular petroleum base Hydraulic Oils, Coolants, Lubricants and all types of Fire-resistant Hydraulic Fluids and water.

**ALUMINUM HEAD  
ALUMINUM HOUSING  
MONEL FILTER ELEMENT**

CAPACITIES: 10—20—30—50 and 75 G.P.M.  
 PIPE SIZES: 1"—1¼"—1½"—2" and 2½".  
 BY-PASS VALVE: Available with or without.  
 OPERATING PRESSURE: Up to 250 p.s.i.  
 OPERATING TEMPERATURES: Up to 300° F.

(For gallon capacities see Note 1 on page 21)



**ENGINEERING DATA—MOUNTING DIMENSIONS—PART NUMBERS**

CAPACITY	10 GPM	20 GPM	30 GPM	50 GPM	75 GPM
PORT SIZE	1" NPTF	1¼" NPTF	1½" NPTF	2" NPTF	2½" NPTF
<b>PRESSURE DROP PSI</b>					
*St'd.	.69	.81	.93	1.18	1.39
S only	1.03	1.27	1.27	1.52	1.84
N only	.80	.95	1.10	1.39	1.65
<b>APPROX. WT. LBS.</b>					
St'd.—S-N	3	5½	7¼	9¼	13¾
<b>DIMENSIONS INCHES</b>					
A	4.69	5.25	5.88	6.56	7.19
B	1.09	1.28	1.50	1.81	2.12
C	8.75	12.62	13.88	15.94	17.94
D	5.88	9.12	10.12	11.38	12.62
E	3.31	3.88	4.38	5.06	5.56
G	4.75	7.62	8.25	9.38	10.12

PORT SIZE	1" NPTF	1¼" NPTF	1½" NPTF	2" NPTF	2½" NPTF
<b>PART NUMBERS</b>					
HOUSING	1510-1	1520-1	1530-1	1550-1	1575-1
HEAD WITHOUT BY-PASS	1510-2	1520-2	1530-2	1550-2	1575-2
HEAD WITH 3 PSI BY-PASS	1510-HB-2	1520-HB-2	1530-HB-2	1550-HB-2	1575-HB-2
HEAD WITH 5 PSI BY-PASS	1510-HB5-2	1520-HB5-2	1530-HB5-2	1550-HB5-2	1575-HB5-2
HEAD WITH 25 PSI BY-PASS	1510-HB25-2	1520-HB25-2	1530-HB25-2	1550-HB25-2	1575-HB25-2
#FILTER ELEMENT ASSEMBLY	310-100	320-100	330-100	350-100	375-100
"O" RING NOMINAL SIZE	1510-3 3½x3¼	1520-3 4x3¾	1530-3 4½x4¼	1550-3 5¼x5	1575-3 5¾x5½
DRAIN PIPE PLUG	1510-4	1520-4	1520-4	1550-4	1550-4
CAP SCREWS	1510-8	1520-8	1530-8	1550-8	1575-8
TOP PIPE PLUGS	1510-9	1510-9	1510-9	1510-9	1510-9

\*St'd. - HYDRAULIC OILS - COOLANTS - LUBRICANTS - 225 SSU @ 100°F  
 S - PHOSPHATE ESTER BASE FIRE RESISTANT FLUIDS - 225 SSU @ 100°F  
 N - AQUEOUS BASE (WATER GLYCOL) FIRE RESISTANT FLUIDS - 225 SSU  
 # 100 MESH TYPE - USE MESH SIZE AS SUFFIX FOR OTHER MESH SIZES  
 \*\*FOR USE WITH VACUUM OR PRESSURE DIFFERENTIAL INDICATOR, SEE PAGES 24, 25, 26 AND 27.



## MODEL NUMBERS — 1500 SERIES LINE TYPE FILTERS SHOWN ON PAGE 20

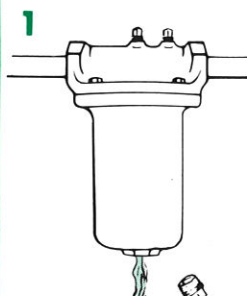
HYDRAULIC OILS — COOLANTS — LUBRICANTS — ALL FIRE RESISTANT FLUIDS

BY-PASS	MESH	10 GPM	20 GPM	30 GPM	50 GPM	75 GPM
		1" NPTF	1 1/4" NPTF	1 1/2" NPTF	2" NPTF	2 1/2" NPTF
MODEL NUMBERS						
No	100	1510-100	1520-100	1530-100	1550-100	1575-100
No	80	1510-80	1520-80	1530-80	1550-80	1575-80
No	60	1510-60	1520-60	1530-60	1550-60	1575-60
No	50	1510-50	1520-50	1530-50	1550-50	1575-50
No	40	1510-40	1520-40	1530-40	1550-40	1575-40
No	30	1510-30	1520-30	1530-30	1550-30	1575-30
No	20	1510-20	1520-20	1530-20	1550-20	1575-20
No	150	1510-150	1520-150	1530-150	1550-150	1575-150
No	200	1510-200	1520-200	1530-200	1550-200	1575-200
3 PSI	100	1510-HB-100	1520-HB-100	1530-HB-100	1550-HB-100	1575-HB-100
3 PSI	80	1510-HB-80	1520-HB-80	1530-HB-80	1550-HB-80	1575-HB-80
3 PSI	60	1510-HB-60	1520-HB-60	1530-HB-60	1550-HB-60	1575-HB-60
3 PSI	50	1510-HB-50	1520-HB-50	1530-HB-50	1550-HB-50	1575-HB-50
3 PSI	40	1510-HB-40	1520-HB-40	1530-HB-40	1550-HB-40	1575-HB-40
3 PSI	30	1510-HB-30	1520-HB-30	1530-HB-30	1550-HB-30	1575-HB-30
3 PSI	20	1510-HB-20	1520-HB-20	1530-HB-20	1550-HB-20	1575-HB-20
5 PSI	100	1510-HB5-100	1520-HB5-100	1530-HB5-100	1550-HB5-100	1575-HB5-100
5 PSI	80	1510-HB5-80	1520-HB5-80	1530-HB5-80	1550-HB5-80	1575-HB5-80
5 PSI	60	1510-HB5-60	1520-HB5-60	1530-HB5-60	1550-HB5-60	1575-HB5-60
5 PSI	50	1510-HB5-50	1520-HB5-50	1530-HB5-50	1550-HB5-50	1575-HB5-50
5 PSI	40	1510-HB5-40	1520-HB5-40	1530-HB5-40	1550-HB5-40	1575-HB5-40
5 PSI	30	1510-HB5-30	1520-HB5-30	1530-HB5-30	1550-HB5-30	1575-HB5-30
5 PSI	20	1510-HB5-20	1520-HB5-20	1530-HB5-20	1550-HB5-20	1575-HB5-20
25 PSI	100	1510-HB25-100	1520-HB25-100	1530-HB25-100	1550-HB25-100	1575-HB25-100
25 PSI	80	1510-HB25-80	1520-HB25-80	1530-HB25-80	1550-HB25-80	1575-HB25-80
25 PSI	60	1510-HB25-60	1520-HB25-60	1530-HB25-60	1550-HB25-60	1575-HB25-60
25 PSI	50	1510-HB25-50	1520-HB25-50	1530-HB25-50	1550-HB25-50	1575-HB25-50
25 PSI	40	1510-HB25-40	1520-HB25-40	1530-HB25-40	1550-HB25-40	1575-HB25-40
25 PSI	30	1510-HB25-30	1520-HB25-30	1530-HB25-30	1550-HB25-30	1575-HB25-30
25 PSI	20	1510-HB25-20	1520-HB25-20	1530-HB25-20	1550-HB25-20	1575-HB25-20
3 PSI	150	1510-HB-150	1520-HB-150	1530-HB-150	1550-HB-150	1575-HB-150
3 PSI	200	1510-HB-200	1520-HB-200	1530-HB-200	1550-HB-200	1575-HB-200
5 PSI	150	1510-HB5-150	1520-HB5-150	1530-HB5-150	1550-HB5-150	1575-HB5-150
5 PSI	200	1510-HB5-200	1520-HB5-200	1530-HB5-200	1550-HB5-200	1575-HB5-200
25 PSI	150	1510-HB25-150	1520-HB25-150	1530-HB25-150	1550-HB25-150	1575-HB25-150
25 PSI	200	1510-HB25-200	1520-HB25-200	1530-HB25-200	1550-HB25-200	1575-HB25-200

Note (1): GPM capacities shown are for suction applications only. For return and low pressure line applications, the filters may be used at 2 to 3 times the capacities shown depending upon allowable pressure drop.

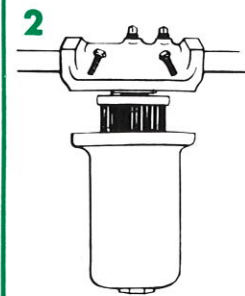
Note (2): To specify MarvelMag Magnet Rods in Filter, insert "M" in Model Number. Example: 1510-HB5-100 becomes "1510-HB5M100." To order Standard Replacement Element specify part No. 310-100. (See part no. table, page 20). To order Replacement Magnetic Element, specify No. 310M100. To order Replacement Element Pleated for Magnetic Rods but less the rods, simply change M in number to MN making it, in above example, Element No. 310MN100.

**1**



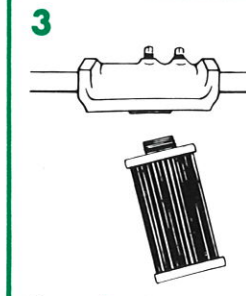
**Remove Drain Plug and Drain Housing**

**2**



**Remove Cap Screws and Separate Head from Housing**

**3**



**Unscrew Filter Element Assembly from Head**

**4 To Clean Filter Element Assembly**

Immerse and swish Filter Element Assembly in any non-caustic cleaning solvent for a short period of time. A stiff fibre brush may be used if necessary to remove impacted deposits between wire cloth serrations. If compressed air is available, blow dry from inside out.

**5 To reassemble filter, simply reverse procedure.**

**CAUTION**

When reassembling filter, be sure that "O" Ring is properly seated in groove in Head.



## BONDED LINE TYPE — WITH CLEANABLE OR THROW-AWAY ELEMENT

EXTRA OUTLET PORT (AT TOP) AND (OPTIONAL) 1/8" PORTS FOR "COLORGAGE" INDICATOR



Up to 50 GPM  
Up to 150 PSI  
1" NPTF and  
1 5/16" — 12  
Ports.

### OPTIONAL PORTS FOR "COLORGAGE"

For added convenience in protecting this filter with a Colorgage Element Condition Indicator (see pages 26, 27), you may order the filter with (optional) 1/8"-27 NPTF Gage Ports at "N" or "R" (see drawings at right) for connecting filter directly to Colorgage quickly and easily. To indicate this option on your filter order, simply replace the first dash (-) in filter model no. with the letter "N" (Normal) or "R" (Reverse). Example: Filter Model No. 151161-2500-529206-7110 becomes "151161N2500-529206-7110" (indicating upstream and downstream gage ports at "N" positions).

PORT POSITIONS	GROUP A HYDRAULIC OILS—COOLANTS—LUBRICANTS—WATER GLYCOL				GROUP B PHOSPHATE ESTER BASE FLUID	
	(1) NPTF	(2) SAE ST. TH'D.	(3) HOUSING NUMBERS	(4) FILTER ELEMENT NUMBERS	(5) HOUSING NUMBERS	(6) FILTER ELEMENT NUMBERS
① & ③	1-11 1/2		151161-†	529206-*	152161-†	530206-*
		1 5/16-12	151162-†	529206-*	152162-†	530206-*
① & ②	1-11 1/2		155161-†	529206-*	156161-†	530206-*
		1 5/16-12	155162-†	529206-*	156162-†	530206-*

†See Table II for By-Pass Settings.

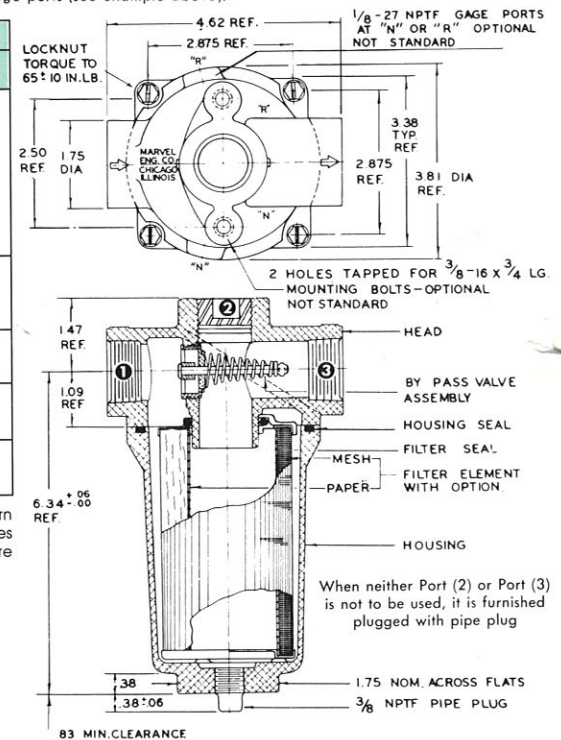
\*Insert Filter Element Media Number (See Table III).

Note: To exercise option for Colorgage connecting ports in filter head, insert, in place of dash in Housing Number:

"N"—for normal gage ports; or "R"—for reverse gage ports (see example above).

Number	Nom. Micron	Filter Element Media
1220	74	200 Mesh Stainless Steel
1215	105	150 Mesh Stainless Steel
1210	141	100 Mesh Stainless Steel
1208	180	80 Mesh Stainless Steel
1206	262	60 Mesh Stainless Steel
1205	308	50 Mesh Stainless Steel
1204	385	40 Mesh Stainless Steel
1203	546	30 Mesh Stainless Steel
1202	914	20 Mesh Stainless Steel
2210	10	8-10 Micron Stainless Steel
2215	15	10-15 Micron Stainless Steel
2225	25	25 Micron Stainless Steel
2240	40	40 Micron Stainless Steel
7103	3	3 Micron Paper
7110	10	10 Micron Paper
7120	20	20 Micron Paper
7203**	3	3 Micron Paper Mesh Inside
7210**	10	10 Micron Paper Mesh Inside
7220**	20	20 Micron Paper Mesh Inside
7303**	3	3 Micron Paper Mesh Outside
7310**	10	10 Micron Paper Mesh Outside
7320**	20	20 Micron Paper Mesh Outside

\*\* Mesh reinforcement recommended for shock return lines, for pressure installations where by-pass valve does not open, or for momentary reverse flow pressure applications.

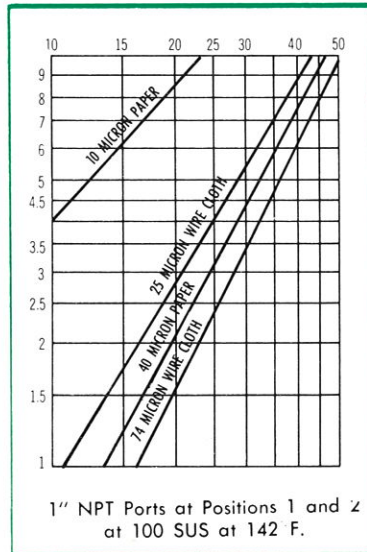
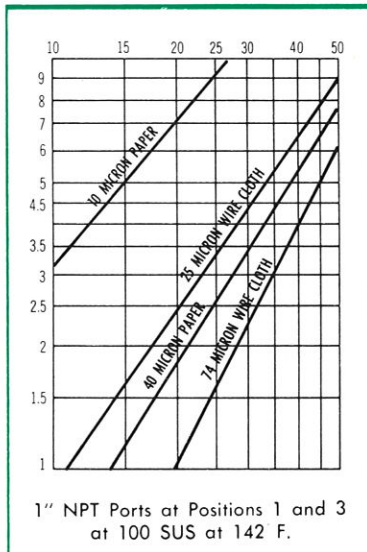


### TABLE II—BY-PASS OPTIONS

25 psi By-Pass Setting recommended for most applications.

By-Pass Setting	ADD to Housing No.
25 psi By-Pass,	ADD 2500 to Housing No.
15 psi By-Pass,	1500
10 psi By-Pass,	1000
8 psi By-Pass,	0800
5 psi By-Pass,	0500
3 psi By-Pass,	0300
No By-Pass,	0000

### PRESSURE DROP CHARTS



### SELECTING FILTER NUMBER

Complete Filter Model Number consists of the following:

- Housing Number for fluid to be filtered. Select from Table 1 Column 3 or 5.
- By-pass Number, from Table II.
- Filter Element Number for fluid selected, from Table I, Column 4 or 6.
- Filter Element Media Number for desired degree of filtration, from Table III.

### EXAMPLE:

A Filter with 1 5/16"-12 SAE Straight Thread Ports for Petroleum Oils, Return Line Installation, 200 Mesh Monel, Element and 25 psi By-pass... is specified by the following:

(a) (b) (c) (d)  
Filter No. 155162-2500-529206-1220  
(Housing Number) (Element No.)

To specify above filter with Magnetic Element, simply change dash in Element Number to "M", making it "529206M1220".

Note: To order Replacement Elements only, simply specify Element Number only. To order Replacement Element plated for magnets but less the magnets, simply change the "M" in Magnetic Element Number to "MN", making it, in above example, "529206MN-1220".