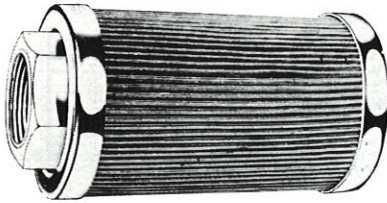


# BONDED SUMP TYPE — UP TO 100 GPM — 1" THRU 3" PIPE SIZES

## WITH OR WITHOUT BY-PASS VALVE

For Use With Hydraulic Oils, Coolants, Lubricants and Fire Resistant Fluids.



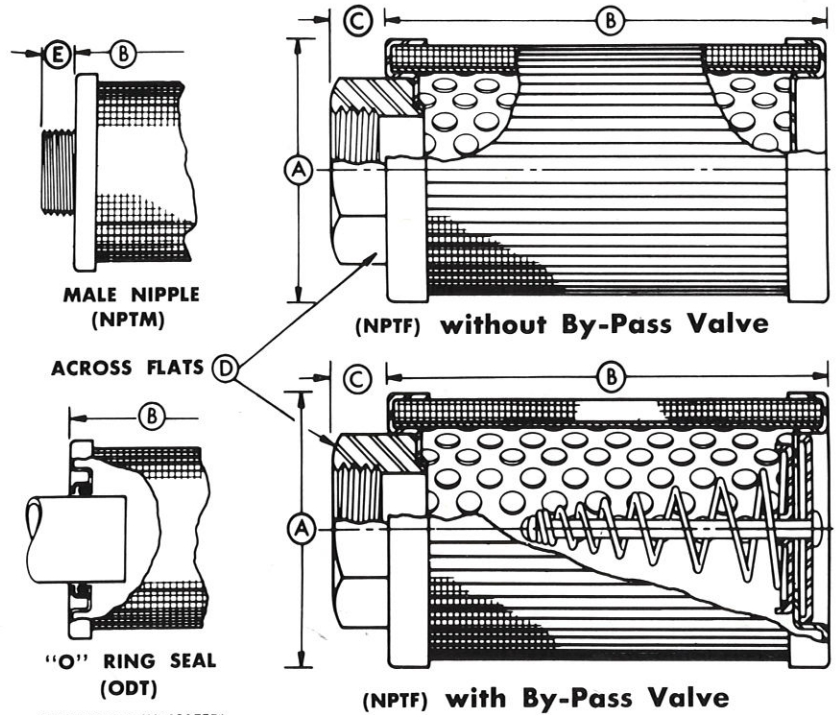
For use with regular petroleum base Hydraulic Oils, Coolants, Lubricants and all types of Fire-resistant Hydraulic Fluids and water.

**CAPACITIES:**  
10 — 20 — 30 — 50 — 75 — and 100 GPM.

**PIPE SIZES:**  
1" — 1 1/4" — 1 1/2" — 2" — 2 1/2" and 3" NPT male and female as well as "O" ring seal.

**OPERATING TEMPERATURES:**  
Up to 300° F.

**HOW TO CLEAN:**  
Remove Filter Element from suction line, swish element in any non-caustic clean solvent for a short period of time (Caution: Do not leave element in solvent). A stiff fibre brush may be used, if necessary, to remove impacted deposits between wire cloth serrations. Shake off excess solvent. If compressed air is available, blow dry from inside out.



"O" RING SEAL (ODT)

(TUBING OD INDICATED)

By-Pass Valve is designed to open within  $\pm 10\%$  of its setting.

### ENGINEERING DATA & MOUNTING DIMENSIONS

SIZE	10 GPM			20 GPM			30 GPM			50 GPM			50 GPM			75 GPM			100 GPM
	1" NPTF	1 1/4" ODT	1" NPTM	1 1/4" NPTF	1 1/2" ODT	1 1/4" NPTM	1 1/2" NPTF	1 3/4" ODT	1 1/2" NPTM	1 1/2" NPTF	1 3/4" ODT	1 1/2" NPTM	2" NPTF	2 3/8" ODT	2" NPTM	2 1/2" NPTF	2 7/8" ODT	2 1/2" NPTM	3" NPTF
<b>PRESSURE DROP PSI</b>																			
St'd	.22	.23	.22	.16	.17	.16	.21	.22	.21	.46	.56	.46	.21	.22	.21	.24	.25	.24	.24
S	.32	.37	.32	.35	.36	.35	.36	.39	.36	.80	.97	.80	.33	.34	.33	.41	.43	.41	.35
N	.28	.29	.28	.19	.21	.19	.26	.27	.26	.58	.71	.58	.25	.26	.25	.28	.30	.28	.27
<b>APPROX. WT. LBS.</b>																			
	3/4	1/2	1/2	1	3/4	3/4	1 1/2	1	1	2	1 1/4	1 1/4	2	1 1/4	1 1/4	2	1 3/4	1 3/4	3
<b>DIMENSIONS INCHES</b>																			
A	2.62	2.62	2.62	3.09	3.09	3.09	3.38	3.38	3.38	3.94	3.94	3.94	3.94	3.94	3.94	4.38	4.38	4.38	6.00
B	4.56	4.56	4.56	7.06	7.06	7.06	8.06	8.06	8.06	9.06	9.06	9.06	9.06	9.06	9.06	9.62	9.62	9.62	10.91
C	.56			.56			.75			.75			.81			1.12			1.23
D	1.62			2.00			2.25			2.25			2.75			3.38			4.12
E			.44			.44			.44			.44			.50			.88	

St'd — HYDRAULIC OILS — COOLANTS — LUBRICANTS — 225 SSU  
 S — PHOSPHATE ESTER BASE FIRE RESISTANT FLUIDS — 225 SSU  
 N — AQUEOUS BASE (WATER GLYCOL) FIRE RESISTANT FLUIDS — 225 SSU

**NOTE:** The "Marvindicator" Vacuum Sensing and Signalling Element Condition Indicator (see Pages 24 & 25) is strongly recommended for use with Sump Type Filters.

## MODEL NUMBERS FOR BONDED SUMP FILTERS ON PAGE 8

		10 GPM			20 GPM			30 GPM		
		1" NPTF	1 1/8" ODT	1" NPTM	1 1/4" NPTF	1 1/8" ODT	1 1/4" NPTM	1 1/2" NPTF	1 1/8" ODT	1 1/2" NPTM
By-Pass	Mesh	MODEL NUMBERS								
No	*100	110-100	210-100	310-100	120-100	220-100	320-100	130-100	230-100	330-100
No	80	110-80	210-80	310-80	120-80	220-80	320-80	130-80	230-80	330-80
No	60	110-60	210-60	310-60	120-60	220-60	320-60	130-60	230-60	330-60
No	50	110-50	210-50	310-50	120-50	220-50	320-50	130-50	230-50	330-50
No	40	110-40	210-40	310-40	120-40	220-40	320-40	130-40	230-40	330-40
No	30	110-30	210-30	310-30	120-30	220-30	320-30	130-30	230-30	330-30
No	20	110-20	210-20	310-20	120-20	220-20	320-20	130-20	230-20	330-20
No	150	110-150	210-150	310-150	120-150	220-150	320-150	130-150	230-150	330-150
No	200	110-200	210-200	310-200	120-200	220-200	320-200	130-200	230-200	330-200
**3 PSI	*100	410-100	510-100	610-100	420-100	520-100	620-100	430-100	530-100	630-100
3 PSI	80	410-80	510-80	610-80	420-80	520-80	620-80	430-80	530-80	630-80
3 PSI	60	410-60	510-60	610-60	420-60	520-60	620-60	430-60	530-60	630-60
3 PSI	50	410-50	510-50	610-50	420-50	520-50	620-50	430-50	530-50	630-50
3 PSI	40	410-40	510-40	610-40	420-40	520-40	620-40	430-40	530-40	630-40
3 PSI	30	410-30	510-30	610-30	420-30	520-30	620-30	430-30	530-30	630-30
3 PSI	20	410-20	510-20	610-20	420-20	520-20	620-20	430-20	530-20	630-20
5 PSI	*100	410-5-100	510-5-100	610-5-100	420-5-100	520-5-100	620-5-100	430-5-100	530-5-100	630-5-100
5 PSI	80	410-5-80	510-5-80	610-5-80	420-5-80	520-5-80	620-5-80	430-5-80	530-5-80	630-5-80
5 PSI	60	410-5-60	510-5-60	610-5-60	420-5-60	520-5-60	620-5-60	430-5-60	530-5-60	630-5-60
5 PSI	50	410-5-50	510-5-50	610-5-50	420-5-50	520-5-50	620-5-50	430-5-50	530-5-50	630-5-50
5 PSI	40	410-5-40	510-5-40	610-5-40	420-5-40	520-5-40	620-5-40	430-5-40	530-5-40	630-5-40
5 PSI	30	410-5-30	510-5-30	610-5-30	420-5-30	520-5-30	620-5-30	430-5-30	530-5-30	630-5-30
5 PSI	20	410-5-20	510-5-20	610-5-20	420-5-20	520-5-20	620-5-20	430-5-20	530-5-20	630-5-20
**3 PSI	150	410-150	510-150	610-150	420-150	520-150	620-150	430-150	530-150	630-150
3 PSI	200	410-200	510-200	610-200	420-200	520-200	620-200	430-200	530-200	630-200
5 PSI	150	410-5-150	510-5-150	610-5-150	420-5-150	520-5-150	620-5-150	430-5-150	530-5-150	630-5-150
5 PSI	200	410-5-200	510-5-200	610-5-200	420-5-200	520-5-200	620-5-200	430-5-200	530-5-200	630-5-200

		50 GPM			50 GPM			75 GPM			100 GPM
		1 1/2" NPTF	1 1/8" ODT	1 1/2" NPTM	2" NPTF	2 3/8" ODT	2" NPTM	2 1/2" NPTF	2 1/8" ODT	2 1/2" NPTM	3" NPTF
By-Pass	Mesh	MODEL NUMBERS									
No	*100	150-1 1/2-100	250-1 1/2-100	350-1 1/2-100	150-100	250-100	350-100	175-100	275-100	375-100	051481-1210
No	80	150-1 1/2-80	250-1 1/2-80	350-1 1/2-80	150-80	250-80	350-80	175-80	275-80	375-80	051481-1208
No	60	150-1 1/2-60	250-1 1/2-60	350-1 1/2-60	150-60	250-60	350-60	175-60	275-60	375-60	051481-1206
No	50	150-1 1/2-50	250-1 1/2-50	350-1 1/2-50	150-50	250-50	350-50	175-50	275-50	375-50	051481-1205
No	40	150-1 1/2-40	250-1 1/2-40	350-1 1/2-40	150-40	250-40	350-40	175-40	275-40	375-40	051481-1204
No	30	150-1 1/2-30	250-1 1/2-30	350-1 1/2-30	150-30	250-30	350-30	175-30	275-30	375-30	051481-1203
No	20	150-1 1/2-20	250-1 1/2-20	350-1 1/2-20	150-20	250-20	350-20	175-20	275-20	375-20	051481-1202
No	150	150-1 1/2-150	250-1 1/2-150	350-1 1/2-150	150-150	250-150	350-150	175-150	275-150	375-150	051481-1215
No	200	150-1 1/2-200	250-1 1/2-200	350-1 1/2-200	150-200	250-200	350-200	175-200	275-200	375-200	051481-1220
**3 PSI	*100	450-1 1/2-100	550-1 1/2-100	650-1 1/2-100	450-100	550-100	650-100	475-100	575-100	675-100	051481-1210-03
3 PSI	80	450-1 1/2-80	550-1 1/2-80	650-1 1/2-80	450-80	550-80	650-80	475-80	575-80	675-80	051481-1208-03
3 PSI	60	450-1 1/2-60	550-1 1/2-60	650-1 1/2-60	450-60	550-60	650-60	475-60	575-60	675-60	051481-1206-03
3 PSI	50	450-1 1/2-50	550-1 1/2-50	650-1 1/2-50	450-50	550-50	650-50	475-50	575-50	675-50	051481-1205-03
3 PSI	40	450-1 1/2-40	550-1 1/2-40	650-1 1/2-40	450-40	550-40	650-40	475-40	575-40	675-40	051481-1204-03
3 PSI	30	450-1 1/2-30	550-1 1/2-30	650-1 1/2-30	450-30	550-30	650-30	475-30	575-30	675-30	051481-1203-03
3 PSI	20	450-1 1/2-20	550-1 1/2-20	650-1 1/2-20	450-20	550-20	650-20	475-20	575-20	675-20	051481-1202-03
5 PSI	*100	450-1 1/2-5-100	550-1 1/2-5-100	650-1 1/2-5-100	450-5-100	550-5-100	650-5-100	475-5-100	575-5-100	675-5-100	051481-1210-05
5 PSI	80	450-1 1/2-5-80	550-1 1/2-5-80	650-1 1/2-5-80	450-5-80	550-5-80	650-5-80	475-5-80	575-5-80	675-5-80	051481-1208-05
5 PSI	60	450-1 1/2-5-60	550-1 1/2-5-60	650-1 1/2-5-60	450-5-60	550-5-60	650-5-60	475-5-60	575-5-60	675-5-60	051481-1206-05
5 PSI	50	450-1 1/2-5-50	550-1 1/2-5-50	650-1 1/2-5-50	450-5-50	550-5-50	650-5-50	475-5-50	575-5-50	675-5-50	051481-1205-05
5 PSI	40	450-1 1/2-5-40	550-1 1/2-5-40	650-1 1/2-5-40	450-5-40	550-5-40	650-5-40	475-5-40	575-5-40	675-5-40	051481-1204-05
5 PSI	30	450-1 1/2-5-30	550-1 1/2-5-30	650-1 1/2-5-30	450-5-30	550-5-30	650-5-30	475-5-30	575-5-30	675-5-30	051481-1203-05
5 PSI	20	450-1 1/2-5-20	550-1 1/2-5-20	650-1 1/2-5-20	450-5-20	550-5-20	650-5-20	475-5-20	575-5-20	675-5-20	051481-1202-05
**3 PSI	150	450-1 1/2-150	550-1 1/2-150	650-1 1/2-150	450-150	550-150	650-150	475-150	575-150	675-150	051481-1215-03
3 PSI	200	450-1 1/2-200	550-1 1/2-200	650-1 1/2-200	450-200	550-200	650-200	475-200	575-200	675-200	051481-1220-03
5 PSI	150	450-1 1/2-5-150	550-1 1/2-5-150	650-1 1/2-5-150	450-5-150	550-5-150	650-5-150	475-5-150	575-5-150	675-5-150	051481-1215-05
5 PSI	200	450-1 1/2-5-200	550-1 1/2-5-200	650-1 1/2-5-200	450-5-200	550-5-200	650-5-200	475-5-200	575-5-200	675-5-200	051481-1220-05

\*100 MESH STANDARD  
\*\*STANDARD BY-PASS

**NOTE:** To specify MarvelMag Magnetic Filters, insert "M" in Model No. Example: 410-100 becomes "410M100." To order Replacement Element only pleated for magnets but less the magnets, change "M" in Number to "MN", making it, in example, "410MNM100."

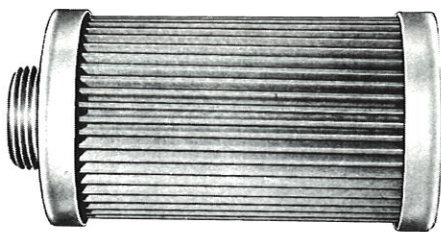
# BONDED SUMP TYPE — ALL STAINLESS STEEL

# MARVEL FILTERS

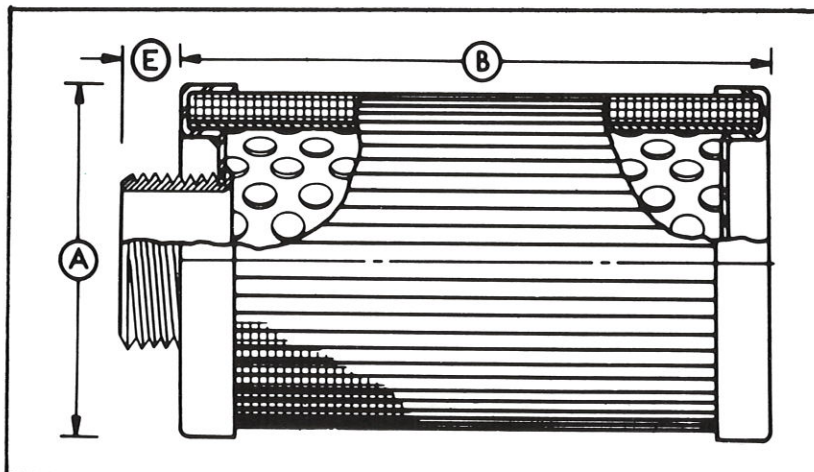
FOR WATER AND SPECIAL FLUIDS — 1000 SERIES — (NO BY-PASS) — Operating Temperatures: Up to 300°F

**CAPACITIES:**  
Up to 75 GPM

**PIPE SIZES:**  
1" through 2½"



To Clean:  
Follow same simple cleaning procedures as described on page 8.



## UNIQUE MARVELMAG MAGNETIC SHIELD

protects entire hydraulic system from those everpresent ferric contaminants

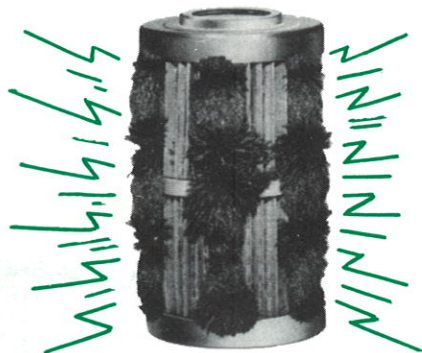


Photo shows amazing effectiveness of MarvelMag magnetic rods in trapping ferric particles, yet leaving large element flow areas that assure continuous full-flow filtration.

### ENGINEERING DATA — MOUNTING DIMENSIONS — MODEL NUMBERS

SIZE	10 GPM	20 GPM	30 GPM	50 GPM	75 GPM
PORT	1" NPTM	1¼" NPTM	1½" NPTM	2" NPTM	2½" NPTM
<b>PRESSURE DROP PSI</b>					
W only	.13	.10	.15	.15	.18
<b>APPROX. WT. LBS.</b>					
1000 SER.	¾	1	1-1/4	1-1/2	2
<b>DIMENSIONS INCHES</b>					
A	2.62	3.09	3.38	3.94	4.38
B	4.56	7.06	8.06	9.06	9.62
E	.44	.44	.44	.50	.88
<b>MESH</b>					
100	1010-100	1020-100	1030-100	1050-100	1075-100
80	1010-80	1020-80	1030-80	1050-80	1075-80
60	1010-60	1020-60	1030-60	1050-60	1075-60
50	1010-50	1020-50	1030-50	1050-50	1075-50
40	1010-40	1020-40	1030-40	1050-40	1075-40
30	1010-30	1020-30	1030-30	1050-30	1075-30
20	1010-20	1020-20	1030-20	1050-20	1075-20
150	1010-150	1020-150	1030-150	1050-150	1075-150
200	1010-200	1020-200	1030-200	1050-200	1075-200

NOTE: To specify MarvelMag Magnetic Filters, insert "M" in Model Number. Example: 1010-60 becomes "1010M60." To order Replacement Element pleated for magnets but less the magnets, simply change "M" in Number to "MN", making it, in example "1010MN60."

Better filtration, longer element life, hours saved in servicing . . . with amazing new MarvelMag elements. The harsh, cutting ferric contaminants (that do the most damage to system components) are instantly trapped by complete, outer MarvelMag Magnetic Shield BEFORE they can reach element, keeping it—and entire system—clean, undamaged and functioning at top efficiency for much longer periods without servicing. Ferric particles small enough to pass through element and on into system are most speedily trapped and retained by the all-encircling magnetic shield. Generous flow areas between magnetic rods remain uncluttered, greatly increasing filter efficiency and life. The magnetic rods do not increase element dimensions, providing complete interchangeability of MarvelMag elements with non-magnetic elements. **Examples for specifying MarvelMag are given on appropriate pages.**

### OVERLAPPING MAGNETIC FIELDS

The individual magnetic rods are full filter element length and their unique design provides powerful magnetic fields along entire length of element. The rods are equally spaced around exterior surface of element so that their magnetic fields overlap to cover full element circumference. This provides a complete magnetic shield around the outer (upstream) side of element in the area of lowest fluid velocity—where ferric particles are most effectively trapped and retained and where overall filtering efficiency is at maximum.



### SO EASY TO SERVICE!

"Lay-in . . . Lift-out" Magnetic rods. MarvelMag Shield is formed by individual magnetic rods placed in grooves on outer surface of Synclinal element. To clean rods, just lift out, wipe off, and lay them back in grooves. Slip-on spring clip keeps rods from being magnetically dislodged accidentally.