

**Norman  
8000 Series  
Tank Top Filters  
0-300 gpm Return  
0-100 gpm Suction**



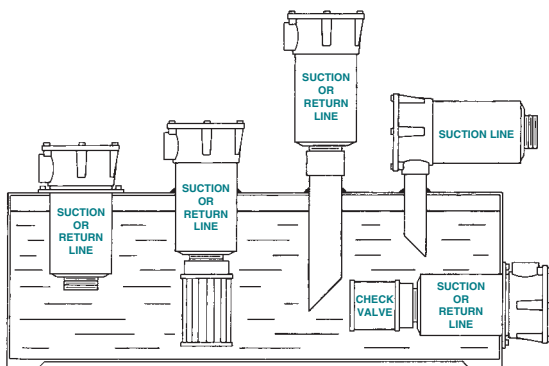
***NORMAN FILTER COMPANY, L.L.C.***  
**PHONE: 708-233-5521 • FAX: 708-430-5961**

# Norman Tank Top Filters



## TYPICAL

## 8400 SERIES INSTALLATIONS



## Fluid Conditioners

Norman Tank Top filters are used to condition a wide variety of fluids. Whether your application is hydraulic, chemical processing or industrial clarification, Norman filters will remove particulate and water contaminants from your system to keep it running longer. Filters increase the life of pumps, valves, regulators and other components in your system, with paybacks of longer system life, reduced down-time and improved productivity. Norman offers the broadest filter line in the industry. This wide variety of sizes, materials, filtration media and optional accessories, all available from stock, allows you to select the model with the best price/ performance value for your application.

## Housings

Norman Tank Top filter housings are made of either aluminum or aluminum and steel, and are rated up to 500 psi maximum operating pressure. These housings come in four basic sizes, with flow rates up to 300 gpm return line and 100 gpm suction line (with 100 ssu oil). Port sizes range from 1/2" to 3" NPT, 1/2" to 1-1/2" SAE or 4 bolt flange. All pressure ratings are static, for applications calling for pulsating or pressure spikes, consult factory.

## Elements

The replacement element is the heart of the filter. Norman offers four media types in a variety of micron ratings. Our water absorbing media is designed to remove water from your hydraulic or lube oils.

**Cellulose:** Resin-impregnated cellulose media has low cost and disposable convenience. Being a depth type filter, it has moderate dirt holding capacity for extended filter life. Available in 3, 10 and 25 micron efficiency ratings and various flow through options. All Norman cellulose elements are bonded with epoxy for excellent fluid compatibility.

**Glass Fiber:** Multi-layer glass fiber elements use aerospace technology to produce high efficiency silt-control filtration. Available in 3 and 10 micron with a beta efficiency rating of 75. Glass fiber elements are all epoxy bonded and can withstand temperatures ranging from - 65° F to 250° F.

**Stainless Steel Wire Mesh:** Available in four mesh sizes, 30,60,100 and 200 with optional magnetic inserts (100 mesh is standard). Wire mesh elements are all epoxy bonded and can withstand temperatures ranging from - 65° F to 250° F.

**Water Absorbing:** The water absorbing media functions as both a particulate and water removal filter. This filter media is available in 3 and 10 micron.

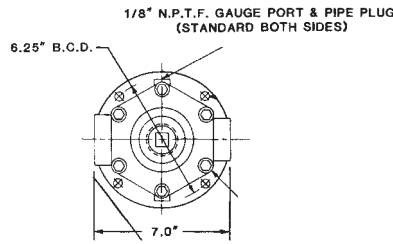
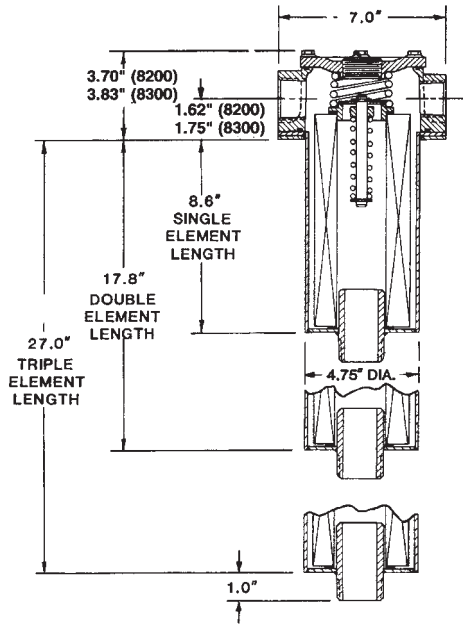
**Optional Accessories:** Norman Tank top filters have a number of optional accessories in stock to modify our standard housings to meet your specific application requirements:

**Bypass Relief Valve:** Internal valve relieves pressure during flow surges or cold start-up.

**Gauge Ports:** Allows operator to view gauge to determine the appropriate time for filter change-out.

**Bottom Port Options:** Six sizes of bottom ports are available; 1-1/2 to 3" npt male pipe, 1-1/2" extended pipe, 1 to 1-1/4" npt female.





**Warning: 80 PSI ▲ P max. without by-pass**

## SPECIFICATIONS

### Rated Flow:

120 GPM Return Line  
40 GPM Suction Line

### Housing Material:

Die Cast Aluminum Head  
Steel Bowl

### Pressure Rating:

**8200 Series:** 100 psi max operating  
**8300 Series:** 500 psi max operating

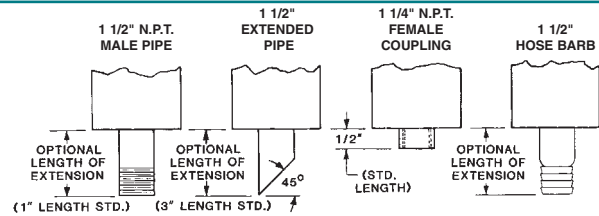
### Temperature:

-65° F. to 250° F.

### Options:

Relief Valve Setting: 0,3,5,15,25 psi  
Gauge Port

**Bottom Port Options Available On Either The 8200 or 8300 Series Filter Housings**



## How To Order:

XX - XXXX - X - XX - X - X - X

Series Prefix	Description
82	1/8" Thick Flange – 100 PSI Max
83	3/8" Thick Flange – 500 PSI Max.

Code	Port Size & Type
0000	* No Ports
2020	1 1/4" NPTF Only
2024	1 1/4" & 1 1/2" NPTF
2424	1 1/2" NPTF
20S20S	1 5/8" – 12 SAE Only
20S24S	1 5/8" – 12 & 1 7/8" – 12 SAE
24S24S	1 7/8" 12 UN (SAE – 24)

No Port models come with "bottom flow" Element housing as a standard

Code	Description	L
1	Single Element	9.19
2	Double Element	18.13
3	Triple Element	27.38

See Back Page For Elements

### Length of extension

Code	Bottom Port Options
EP	Extended Pipe (3" Std Length)
MP	Male Pipe (1" Std Length)
FC	Female Coupling
HB	Hose Bard
V	Check Valve

Code	By-Pass Valve Setting
00	No-By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI

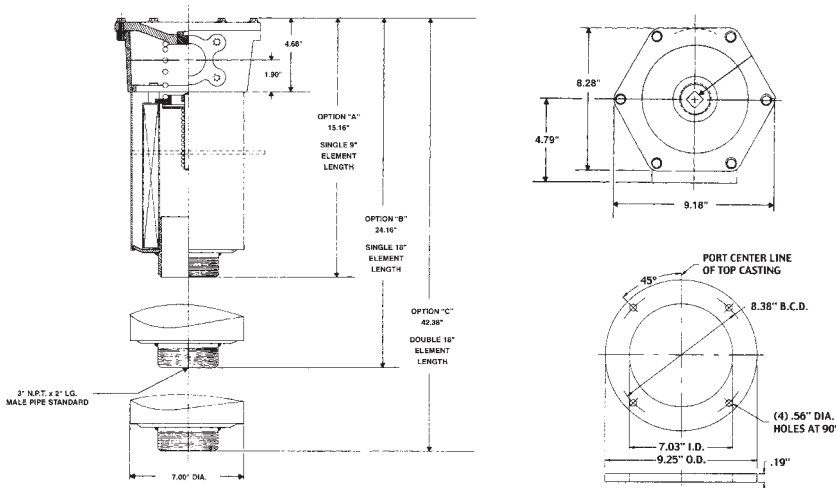
## ELEMENT SELECTION

Part Number	Filtration Rating (Nominal)	Average Beta 10	Filter Media Area	Dirt Holding Capacity	OAL	Flow Direction Thru Element
8283A-3	3 Micron	15.0	1120 Sq. In.	47 Grams	9.19"	Bi-Directional
8283-3AQ	3 Micron	60.0	461 Sq. In.	19 Grams	9.19"	Bi-Directional
8283A-10	10 Micron	1.5	1120 Sq. In.	45 Grams	9.19"	Bi-Directional
8283A-25	25 Micron	9.0	1120 Sq. In.	45 Grams	9.19"	Bi-Directional
8283G-141R	141 Micron	—	151 Sq. In.	9.82 Grams	9.19"	Outside to Inside
8283G-141S	141 Micron	—	151 Sq. In.	9.82 Grams	9.19"	Inside to Outside
8283G-141RM	141 Micron	—	109 Sq. In.	7.09 Grams	9.19"	Outside to Inside
8283G-141SM	141 Micron	—	109 Sq. In.	7.09 Grams	9.19"	Inside to Outside
8283A2-10	10 Micron	9.0	2240 Sq. In.	90 Grams	18.19"	Bi-Directional
8283A2-25	25 Micron	1.5	2240 Sq. In.	90 Grams	18.19"	Bi-Directional
8283G2-141R	141 Micron	—	302 Sq. In.	19.63 Grams	18.19"	Outside to Inside
8283G-10	10 Micron	—	151 Sq. In.	9.28 Grams	9.19"	Outside to Inside
8283M-3	B3 =75	7.5	1120 Sq. In.	44.80 Grams	9.19"	Outside to Inside
8283M-10	B10 =75	7.5	1120 Sq. In.	67.20 Grams	9.19"	Outside to Inside
8283M2-10	B10=75	7.5	2240 Sq. In.	134.40 Grams	18.19"	Outside to Inside



# 8400 SIZE

# 300 gpm Return / 100 gpm Suction



## SPECIFICATIONS

### Rated Flow:

300 GPM Return Line  
100 GPM Suction Line

### Housing Material:

Die Cast Aluminum Head  
Steel Bowl

### Pressure Rating:

300 psi maximum operating pressure

### Temperature:

-65° F. to 250° F.

### Options:

Relief Valve Setting: 0,3,5,15,25,50 psi  
Gauge Port

**Warning: 80 PSI ▲ P max. without by-pass**

## How To Order: 84 - XXXX - X - XX- X- (X.XX) - XXXX

For Elements  
See Back Cover

Code	Port Size & Type
2400	2" (4) Bolt SAE Flange
2824	2 1/2" (4) Bolt SAE Flange & 2" NPTF Combination
3200	3" (4) Bolt SAE Flange

Code	Port Size & Type
1	Single 9" Element Length
2	Single 18" Element Length
4	Double 18" Element Length

Code	Port Size & Type
00	No By-Pass Valve
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Description
0.00	Customer to weld flange To filter housing
	Dimensions in Inches carried out two (2) decimal places. Ex. 8 9/16" = 8.56
	Desired height from Casting port center line Mounting surface (reservoir) Note Mfg. Tolerances ± .06"

Code	Mounting Flange Option
0	No Flange
B	Bolt Flange
W	Weld Flange

## ELEMENT SELECTION

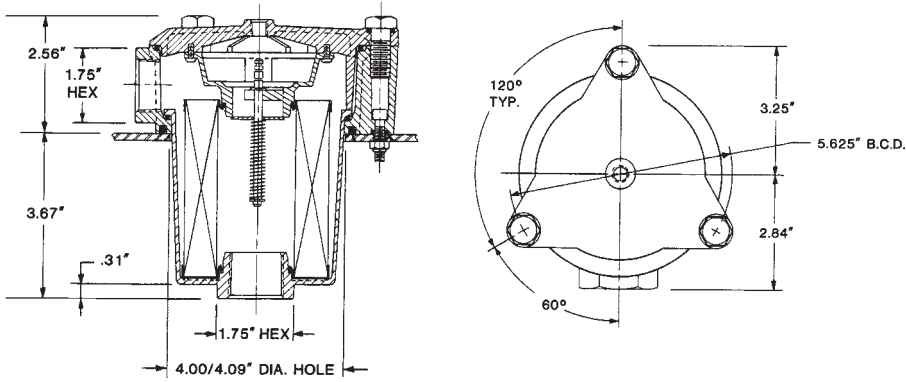
Part Number	Filtration Rating (Nominal)	Average Beta 10	Filter Media Area	Dirt Holding Capacity	Element Dimensions			Flow Direction Through Element	Carton Quantity	Carton Weight	Pallet Quantity	Pallet Weight
					OD	ID	OAL					
84A-3	3 Micron	15.0	1240 Sq. In.	52 Grams	5.18"	3.4"	9.13"	Bi-Directional	12 Pcs.	26 Lbs.	288 Pcs.	660 Lbs.
84-A10	10 Micron	9.0	1520 Sq. In.	61 Grams	5.18"	3.4"	9.13"	Bi-Directional	12 Pcs.	26 Lbs.	288 Pcs.	660 Lbs.
84G-141R	141 Micron	—	232 Sq. In.	15.08 Grams	5.18"	3.4"	9.13"	Outside To Inside	12 Pcs.	24 Lbs.	288 Pcs.	610 Lbs.
84G-141S	141 Micron	—	232 Sq. In.	15.08 Grams	5.18"	3.4"	9.13"	Inside To Outside	12 Pcs.	24 Lbs.	288 Pcs.	610 Lbs.
842A-3	3 Micron	15.0	2475 Sq. In.	104 Grams	5.18"	3.4"	18.13"	Bi-Directional	6 Pcs.	22 Lbs.	144 Pcs.	565 Lbs.
842-3AQ	3 Micron	60.0	1250 Sq. In.	52 Grams	5.18"	3.4"	18.13"	Bi-Directional	6 Pcs.	26 Lbs.	144 Pcs.	660 Lbs.
842A-10	10 Micron	9.0	3040 Sq. In.	122 Grams	5.18"	3.4"	18.13"	Bi-Directional	6 Pcs.	24 Lbs.	144 Pcs.	610 Lbs.
842-10AQ	10 Micron	5.6	1250 Sq. In.	26 Grams	5.18"	3.4"	18.13"	Bi-Directional	6 Pcs.	26 Lbs.	144 Pcs.	660 Lbs.
842A-25	25 Micron	1.5	3040 Sq. In.	122 Grams	5.18"	3.4"	18.13"	Bi-Directional	6 Pcs.	22 Lbs.	144 Pcs.	565 Lbs.
842G-141R	141 Micron	—	465 Sq. In.	30.22 Grams	5.18"	3.4"	18.13"	Outside To Inside	6 Pcs.	22 Lbs.	144 Pcs.	565 Lbs.
842G-141S	141 Micron	—	465 Sq. In.	30.22 Grams	5.18"	3.4"	18.13"	Inside to Outside	6 Pcs.	22 Lbs.	144 Pcs.	565 Lbs.
84M-3	B3 =75	—	1297 Sq. In.	51.88 Grams	5.18"	3.4"	9.13"	Outside To Inside	12 Pcs.	26 Lbs.	288 Pcs.	660 Lbs.
84M-10	B10 =75	—	1592 Sq. In.	195.62 Grams	5.18"	3.4"	9.13"	Outside To Inside	12 Pcs.	26 Lbs.	288 Pcs.	660 Lbs.
842M-3	B10 =75	—	2594 Sq. In.	155.64 Grams	5.18"	3.4"	18.13"	Outside To Inside	6 Pcs.	24 Lbs.	144 Pcs.	610 Lbs.
842M-10	B10 =75	—	3183 Sq. In.	191 Grams	5.18"	3.4"	18.13"	Outside To Inside	6 Pcs.	24 Lbs.	144 Pcs.	610 Lbs.

**NOTE:** Standard – 100 Mesh stainless steel wire cloth is standard for filter elements. Optional – 30, 60, & 200 Mesh wire cloth.



# 8100 SIZE

34 gpm Return / 15 gpm Suction



### SPECIFICATIONS

**Rated Flow:**

- 34 GPM Return Line
- 15 GPM Suction Line

**Housing Material:**

Die Cast Aluminum Head + Body

**Pressure Rating:**

100 psi max operating

**Warning: 80 PSI ▲ P max. without by-pass valve.**

**Temperature:**

-65° F. to 250° F.

**Options:**

Relief Valve Setting: 0,3,5,15,25 psi  
Gauge Port

**Total Assembly Weight:**

3.5 pounds

## How To Order: 81 - XX - XX - X

Code	Inlet & Outlet Ports
08P	1/2" NPTF
08S	3/4" UN (SAE-8)
12P	3/4" NPTF
12S	1 1/16" 12 UN (SAE-12)
16P	1" NPTF
16S	1 5/16" 12 UN (SAE-16)

Code	By-Pass Valve Setting
00	No-By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI

Code	Gauge Port Location
0	No Port Required
1	1/8" NPTF gauge port in cover

### ELEMENT SELECTION

Application	Part Number	Filtration Rating (Nominal)	Average Beta	Filter Media Area	Dirt Holding Capacity	Media Type
Return Line	81A-10R	10 Micron	4.0	405 sq. in.	8.5 Grams	Cellulose
	81M-10R	B 10 = 75	7.5	405 sq. in.	24.3 Grams	Synthetic
Filter Elements (Outside To Inside Flow)	81A-25R	25 Micron	1.5	405 sq. in.	16.3 Grams	Cellulose
	81G-75R	75 Micron	7.5	58 sq. in.	3.19 Grams	200 Mesh SS
	81G-141R	141 Micron	7.5	58 sq. in.	3.77 Grams	100 Mesh SS
Suction Line Filter Elements (Inside To Outside Flow Through Element)	81A-10S	10 Micron	4.0	405 sq. in.	8.5 Grams	Cellulose
	81A-25S	25 Micron	1.5	405 sq. in.	16.3 Grams	Cellulose
	81G-75S	75 Micron	7.5	58 sq. in.	3.19 Grams	200 Mesh SS
	81G-141S	141 Micron	7.5	58 sq. in.	3.77 Grams	100 Mesh SS
	81G-280S	280 Micron	7.5	58 sq. in.	4.06 Grams	60 Mesh SS
	81G-560S	560 Micron	7.5	58 sq. in.	4.35 Grams	30 Mesh SS
	81M-10S	B 10 = 75	7.5	405 sq. in.	24.3 Grams	Synthetic



# Norman Filtration Systems



## ***Norman Filter Panel***

Available in 5 and 11 gpm flow rates  
Two stage filtration  
Industrial grade pump & motor  
Filtration down to 1 micron absolute  
Water absorbing elements available  
Y-Strainer on pump inlet



## ***Norman Mighty Might***

Available in 4 gpm flow rates  
Two stage filtration  
Compact Lightweight System



## ***Norman Filter Cart***

Available in 5 and 11 gpm flow rates  
Two stage filtration  
Industrial grade pump & motor  
Filtration down to 1 micron absolute  
Water absorbing elements available  
Y-Strainer on pump inlet  
Portable for multiple system use



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