



BF SERIES SPIN-ON FILTER HEAD

Flows Up To: 7 GPM (Return) 2 GPM (Suction)

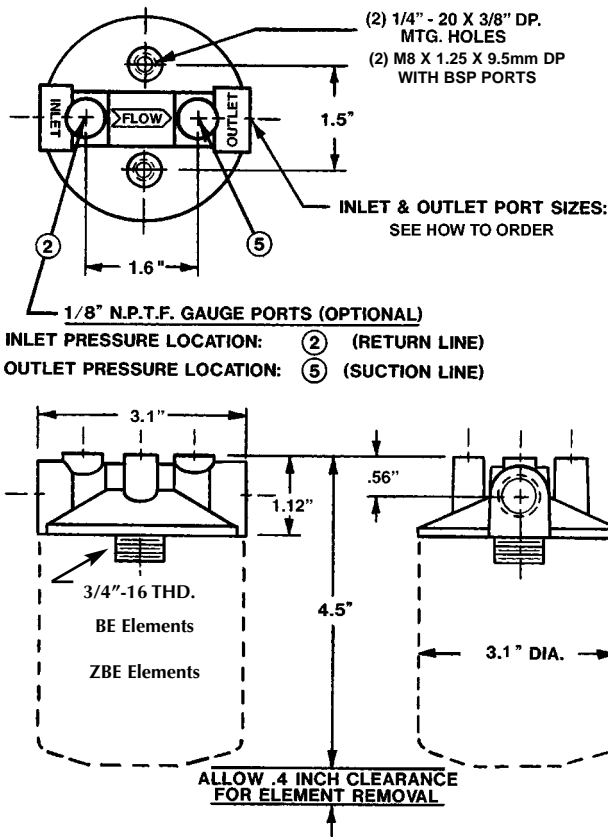
- Port Sizes:
- 1/4" NPTF
 - 3/8" NPTF
 - 1/4" BSP
 - 9/16" - 18 UN (SAE - 6)

Pressure: 200 PSI Max. Operating

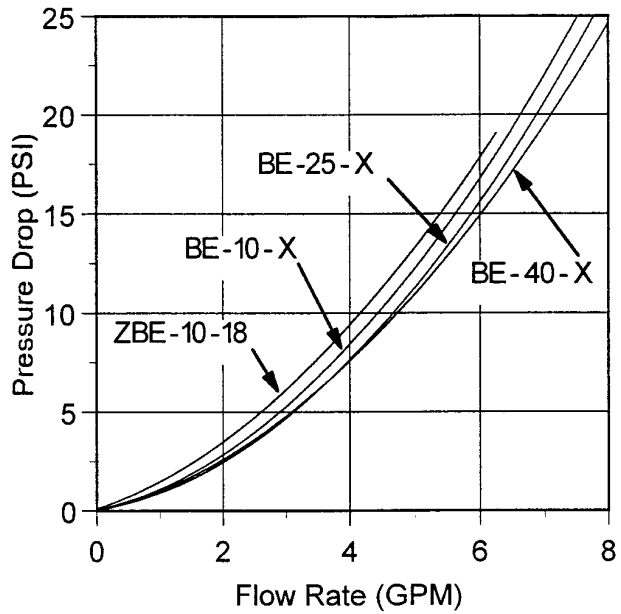
Temperature: Up to +250° F. Operating

Applications: Petroleum based fluids only.
Consult factory for synthetic fluids.

SPIN-ON FILTERS



Average Pressure Drop Through Clean Filter Assembly With 150 SUS Oil At 105 ° F.

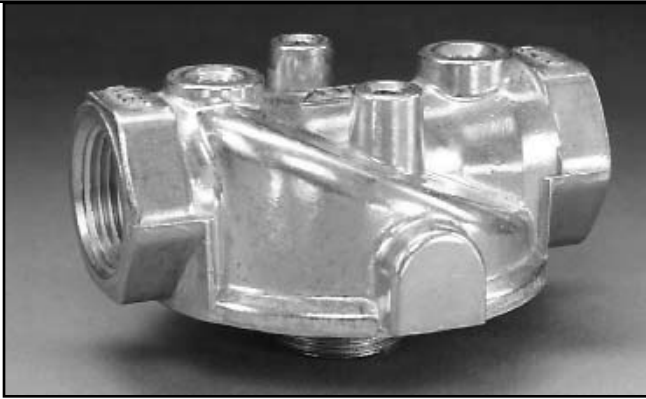


HOW TO ORDER: Filter Head: **BF - XX - X**

Code	Inlet & Outlet Ports
02	1/4" NPTF
02C	1/4" BSP (G1/4"-19)
03	3/8" NPTF
06	9/16" - 18 UN (SAE - 6)

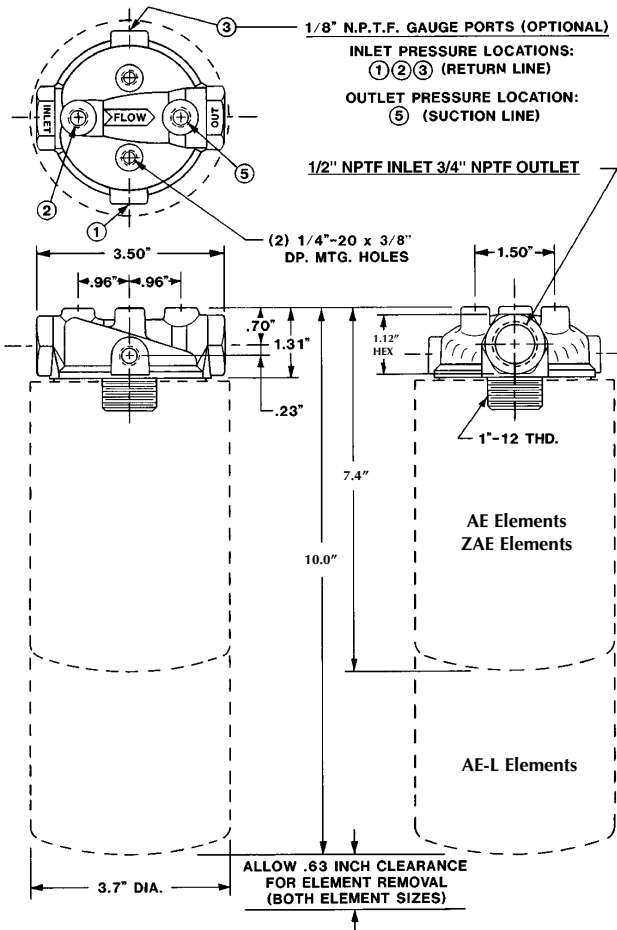
Code	Gauge Port Location
0	No Port Required
2	Return Line
5	Suction Line

BE & ZBE Element : See Page C23

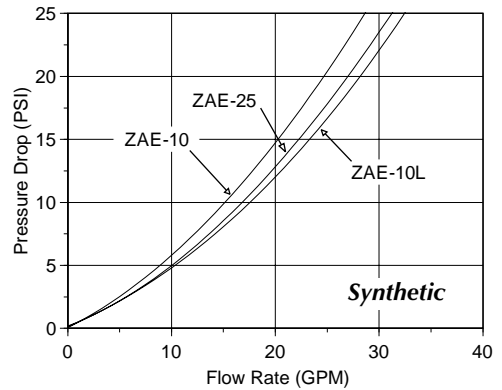
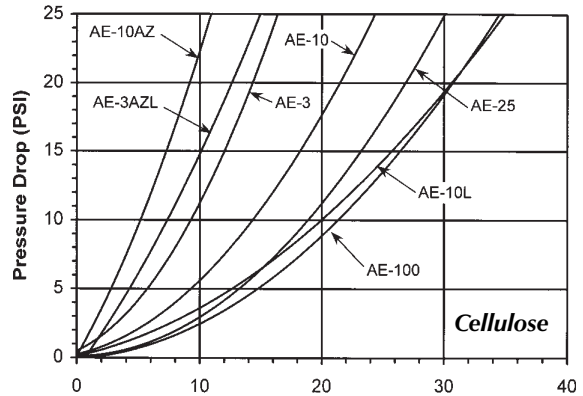


ZAF-05 SERIES SPIN-ON FILTER HEADS

Flows Up To: 22 GPM (Return) 5 GPM (Suction)
 Port Sizes: • 1/2" NPTF
 • 3/4" - 16 UN (SAE - 8)
 Pressure: 250 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

ZAF - XX - XX - X

Code	Inlet & Outlet Ports
05	1/2" NPTF
08	3/4" - 16 UN-2B(SAE-8)

Code	By-Pass Valve Setting
00	No By-Pass
05	5 PSI
10	10 PSI
30	30 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

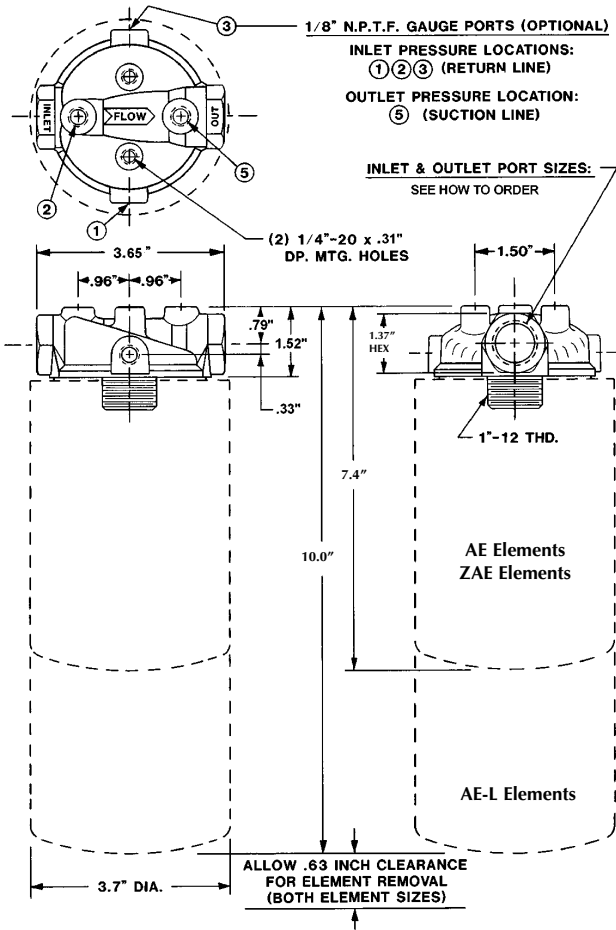
AE & ZAE Element Data: See Pages C24-C25



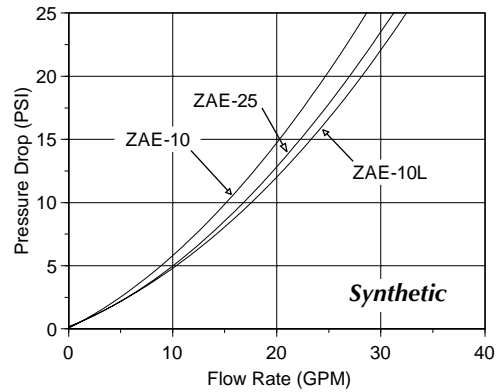
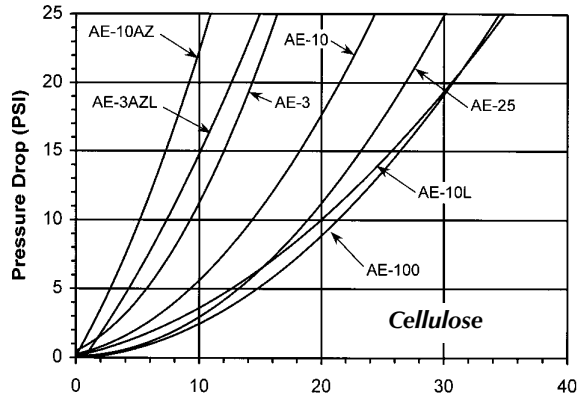
ZAF-0507 SERIES SPIN-ON FILTER HEADS

Flows Up To: 22 GPM (Return) 5 GPM (Suction)
 Port Sizes: • 1/2" NPTF Inlet 3/4" NPTF Outlet
 Pressure: 250 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

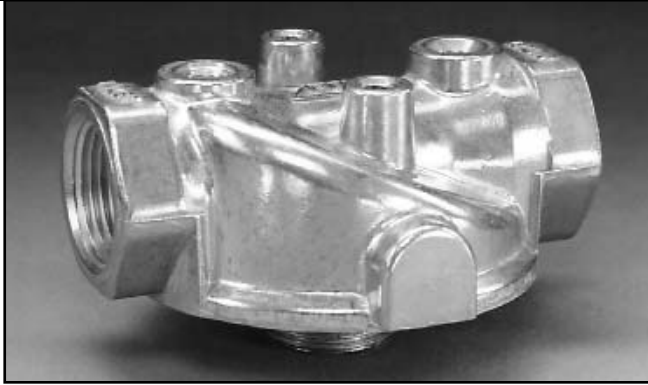
ZAF - 0507 - XX - X

Model

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

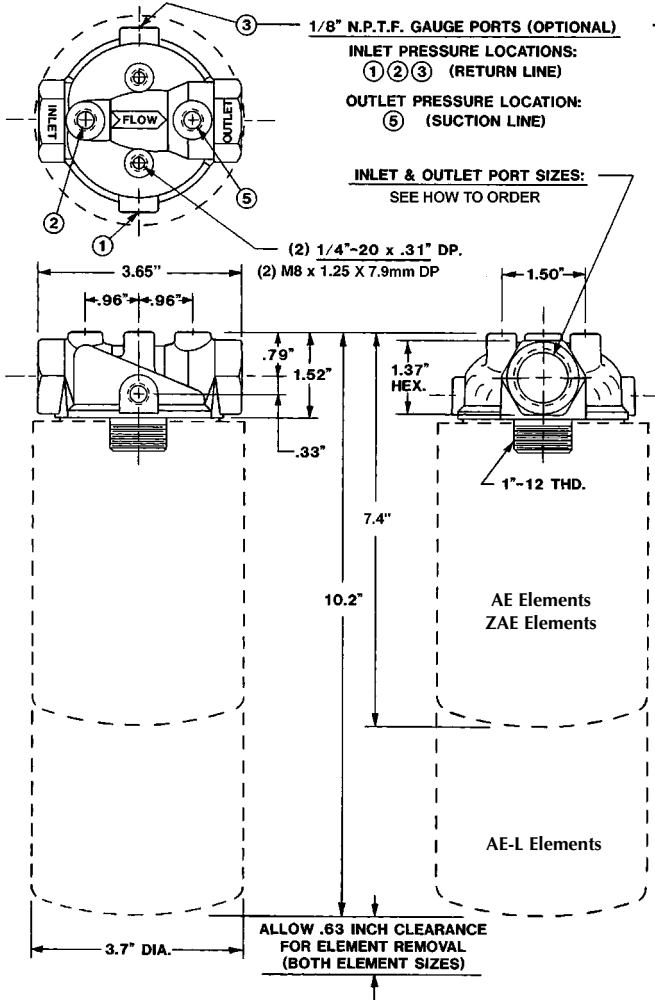
AE & ZAE Element Data: See Pages C24-C25



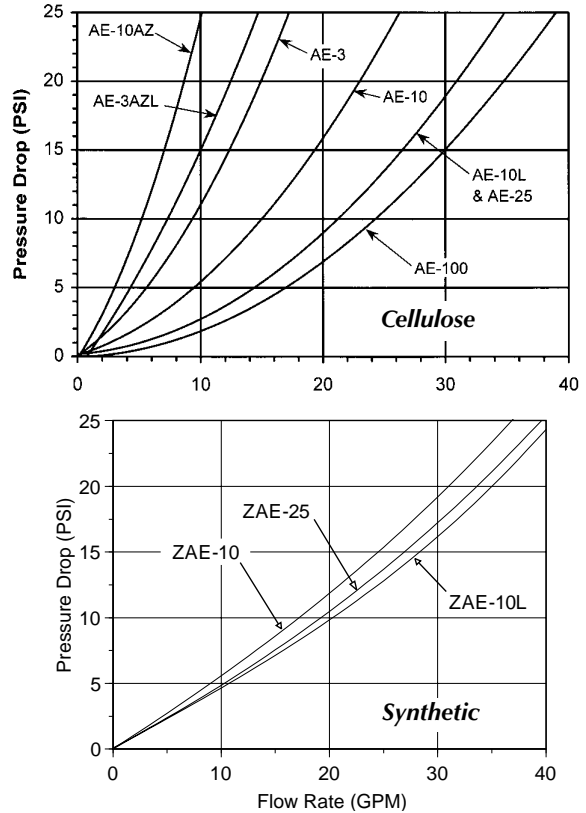
ZAF-07 SERIES SPIN-ON FILTER HEADS

Flows Up To: 25 GPM (Return) 9 GPM (Suction)
 Port Sizes: • 3/4" NPTF
 • 1 1/16" - 12 UN (SAE - 12)
 • 3/4" BSP
 Pressure: 250 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

ZAF - XX - XX - X

Code	Inlet & Outlet Ports
07	3/4" NPTF
07C	3/4" BSP (G 3/4"-14)
11	1 1/16"-12 UN-2B(SAE-12)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

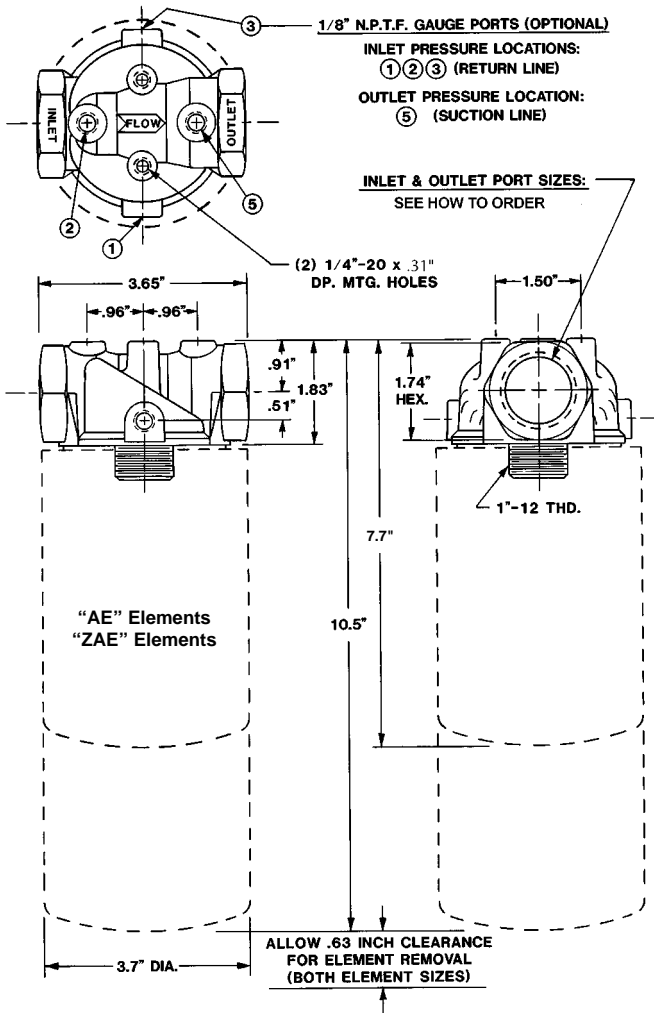
AE & ZAE Element Data: See Pages C24-C25



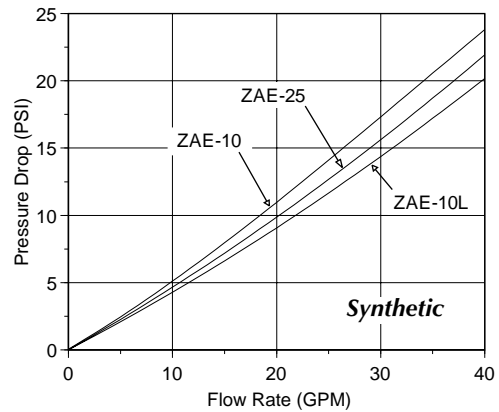
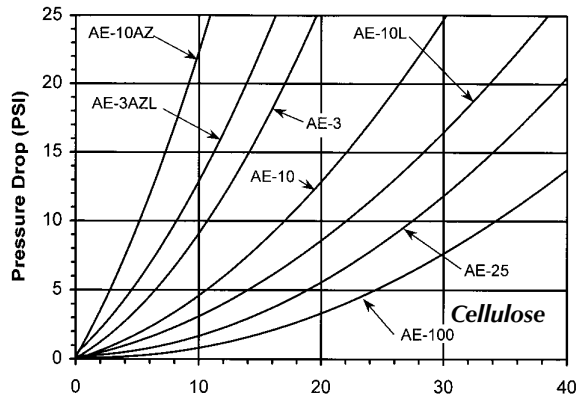
ZAF-10 SERIES SPIN-ON FILTER HEADS

Flows Up To: 32 GPM (Return) 14 GPM (Suction)
 Port Sizes: • 1" NPTF
 • 1 5/16" - 12 UN (SAE - 16)
 Pressure: 250 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS



*Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.*



HOW TO ORDER:

ZAF - XX - XX - X

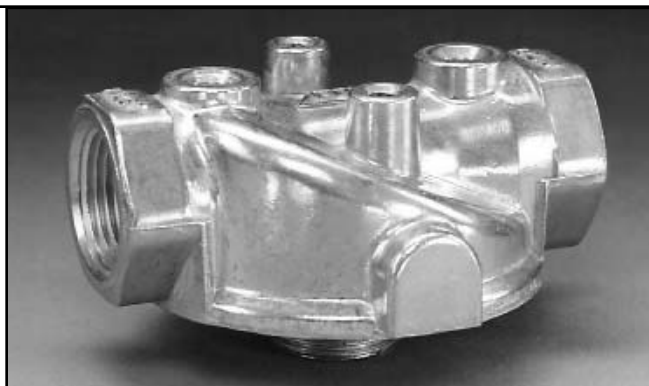
Code	Inlet & Outlet Ports
10	1" NPTF
13	1 5/16"-12 UN-2B(SAE-16)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

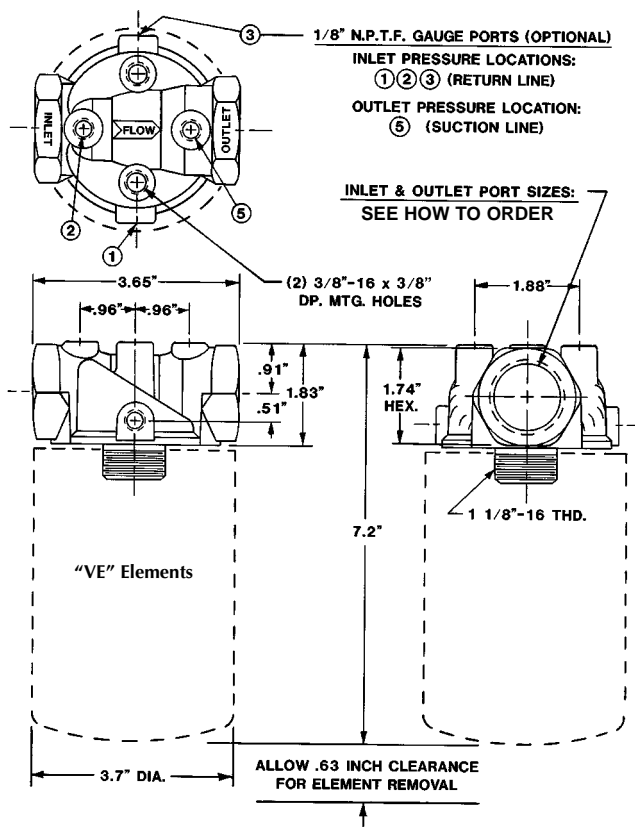
AE & ZAE Element Data: See Pages C24-C25



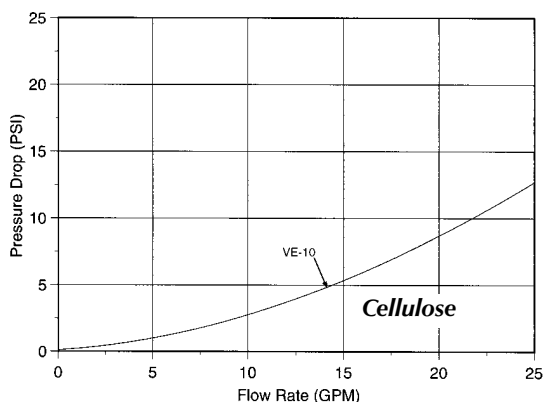


VAF SERIES SPIN-ON FILTER HEADS

Flows Up To: 32 GPM (Return) 14 GPM (Suction)
 Port Sizes: • 1" NPTF
 • 1 5/16" - 12 UN (SAE - 16)
 Pressure: 250 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



Manufacturer	Filter Assembly Number	Replacement Spin-on Element Number
Lenz	CP-1000-10P	CP-1002-10
Vickers	OFRS25P10	573082
Zinga	VAF-10-25-0 / VE-10	VE-10

HOW TO ORDER:

VAF - XX - XX - X

Code	Inlet & Outlet Ports
10	1" NPTF
13	1 5/16"-12 UN-2B(SAE-16)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

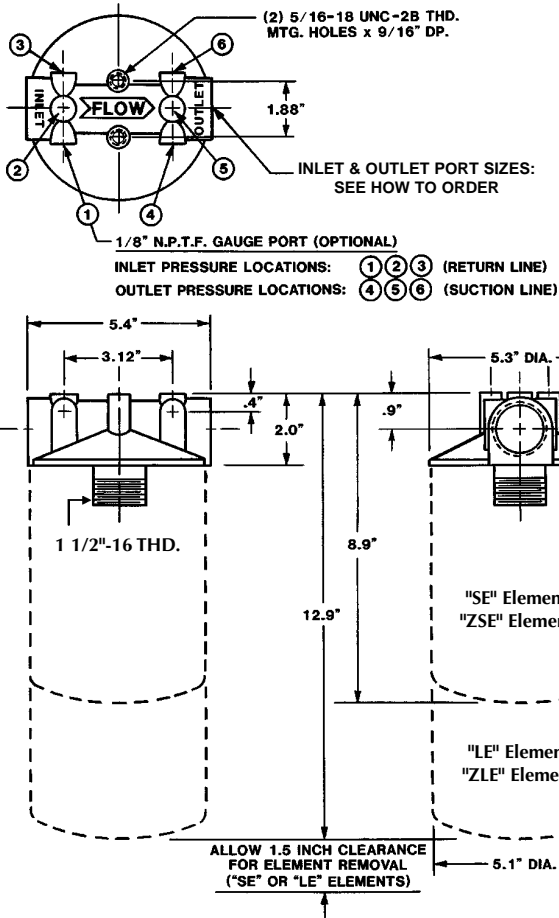
Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

VE Element Data: See Page C30

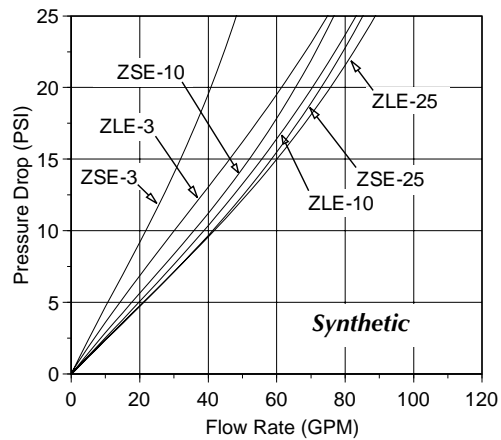
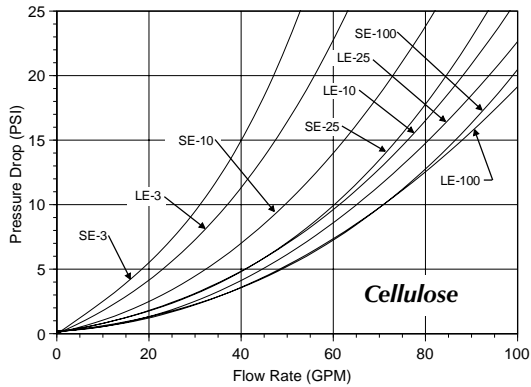


SF-100 SERIES SPIN-ON FILTER HEADS

Flows Up To: 40 GPM (Return) 15 GPM (Suction)
 Port Sizes: • 1" NPTF
 • 1 5/16" - 12 UN (SAE - 16)
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
With 150 SUS Oil At 105° F.



HOW TO ORDER:

SF - XXX - XX - X

Code	Inlet & Outlet Ports
100	1" NPTF
130	1 5/16"-12 UN-2B(SAE-16)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

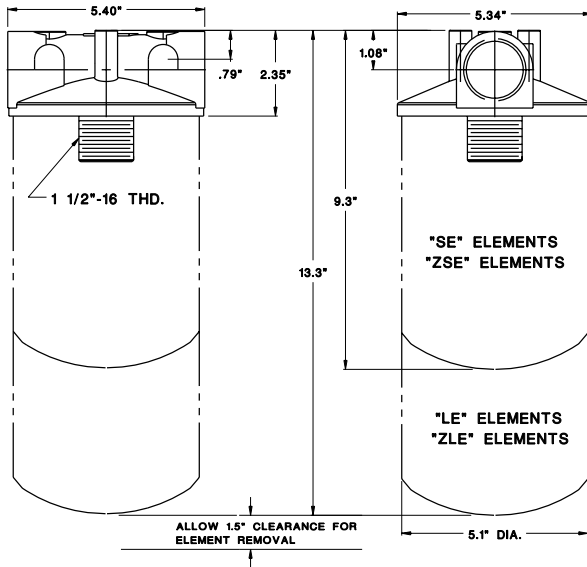
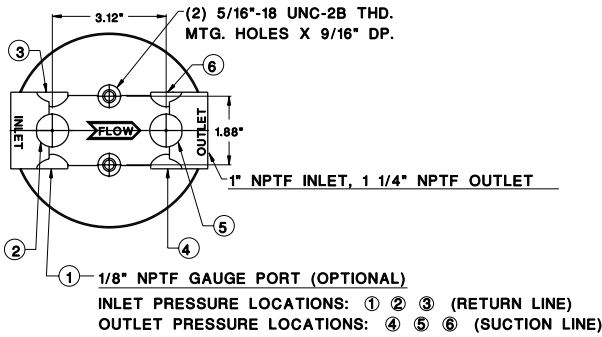
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



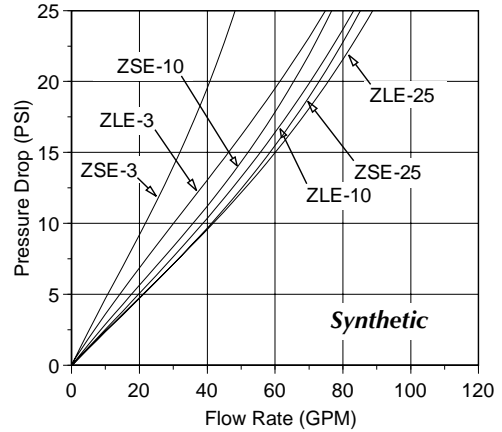
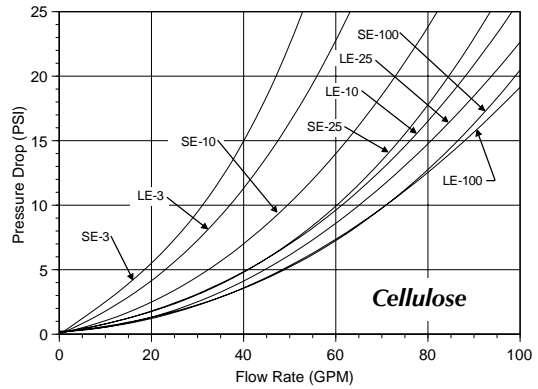


SF-1012 SERIES SPIN-ON FILTER HEADS

Flows Up To: 40 GPM (Return) 15 GPM (Suction)
 Port Sizes: • 1" NPTF Inlet
 • 1 1/4" NPTF Outlet
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

SF - 1012 - XX - X

Model

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



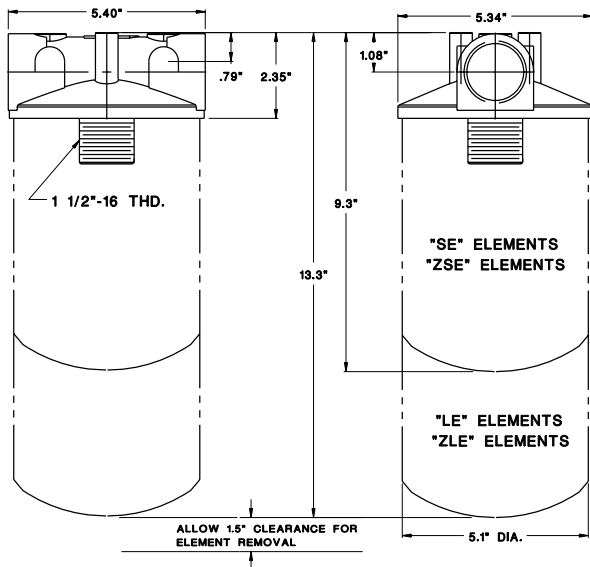
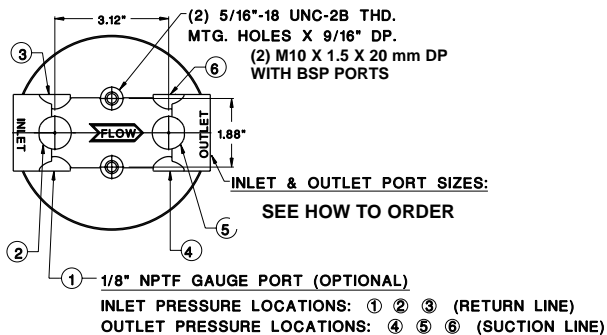
SF-120 SERIES SPIN-ON FILTER HEADS

Flows Up To: 70 GPM (Return) 25 GPM (Suction)
 Port Sizes:

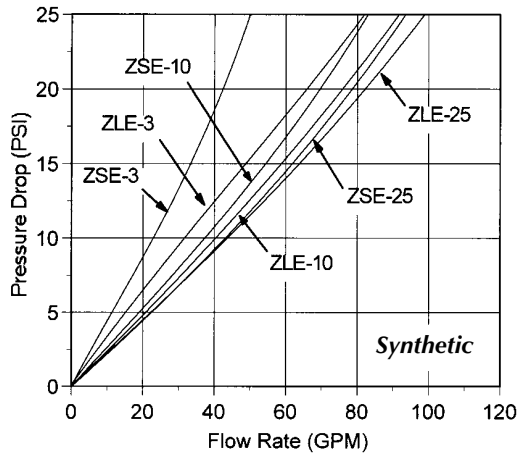
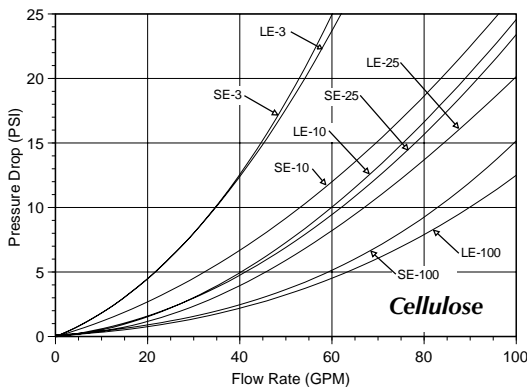
- 1 1/4" NPTF
- 1 1/4" BSP
- 1 5/8" - 12 UN (SAE - 20)

 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS



Average Pressure Drop Through Clean Filter Assembly With 150 SUS Oil At 105° F.



HOW TO ORDER:

SF - XXX - XX - X

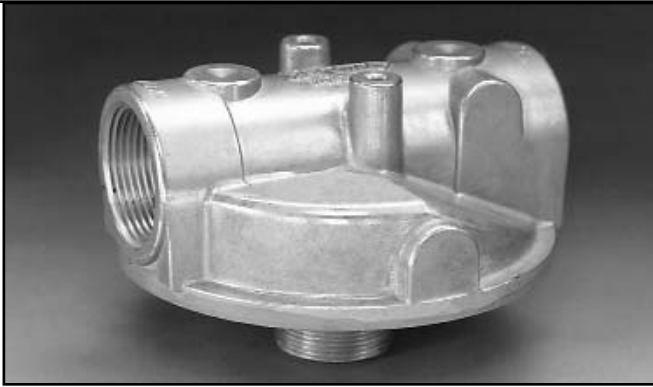
Code	Inlet & Outlet Ports
120	1 1/4" NPTF
120C	1 1/4" BSP (G 1 1/4"-11)
160	1 5/8"-12 UN-2B(SAE- 20)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

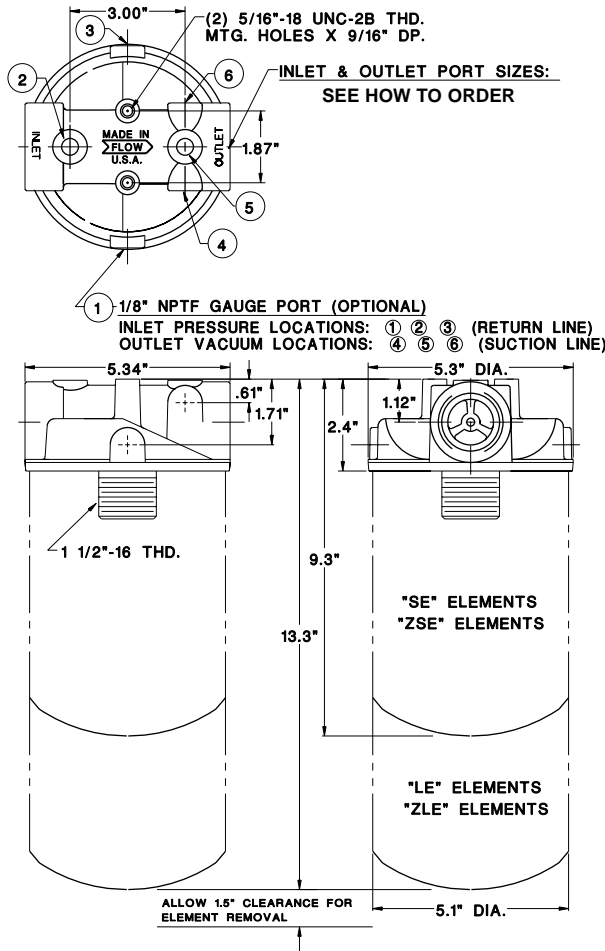
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



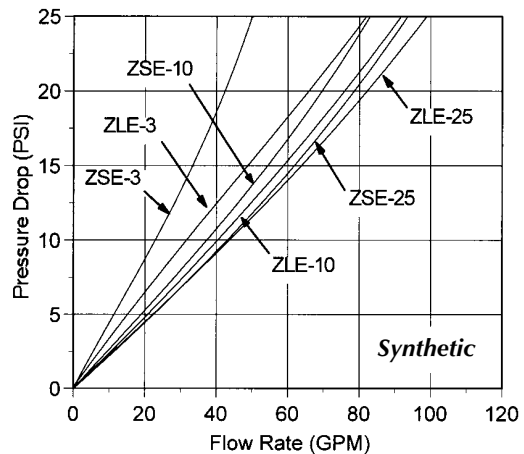
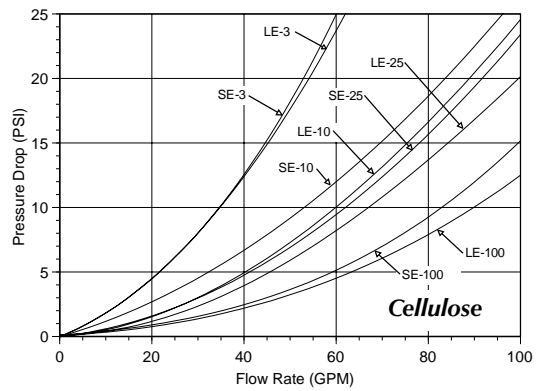


SF-121 SERIES SPIN-ON FILTER HEADS

Flows Up To: 70 GPM (Return) 25 GPM (Suction)
 Port Sizes: • 1 1/4" NPTF
 • 1 5/8" - 12 UN (SAE - 20)
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Thru Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

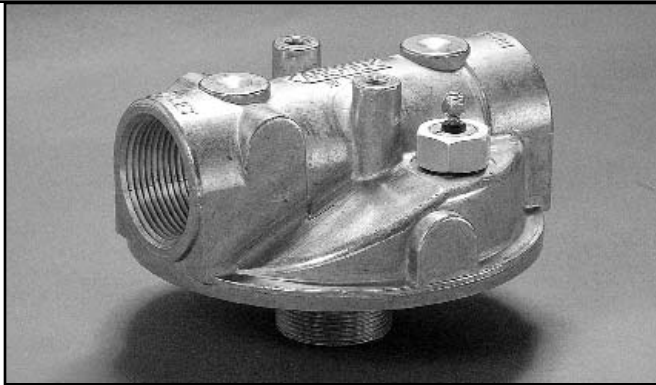
SF - XXX - XX - X

Code	Inlet & Outlet Ports
121	1 1/4" NPTF
161	1 5/8"-12 UN(SAE- 20)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



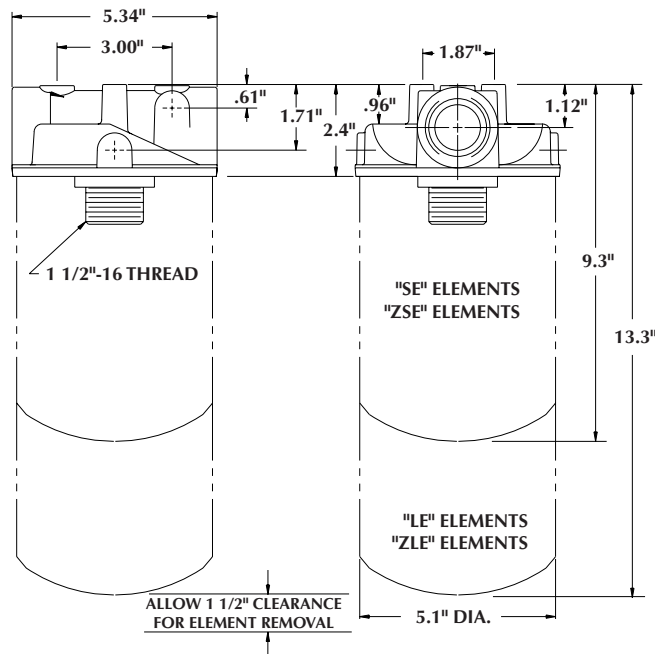
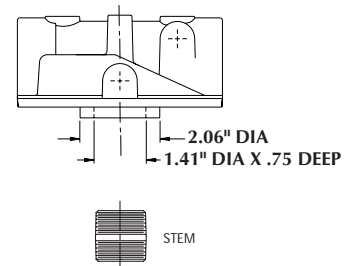
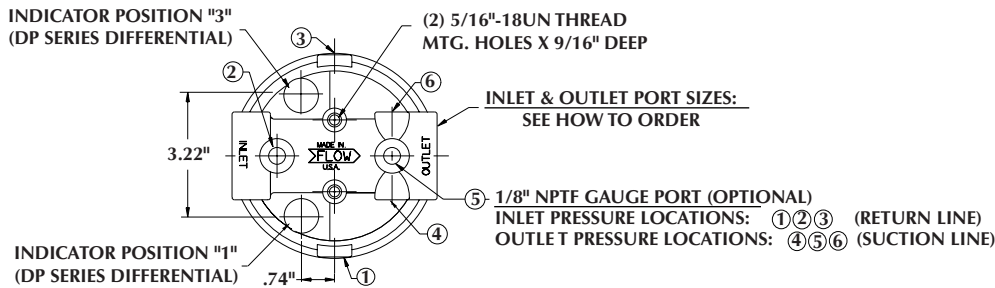
SF-122/125 SERIES SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

Flows up to: 70 GPM (Return) 25 GPM (Suction)
 Port Size: • 1 1/4" NPTF
 • 1 5/8" UN (SAE - 20)
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to + 250° F. Operating
Limited by Indicator Selection
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS

SF-122/162

SF-125/165



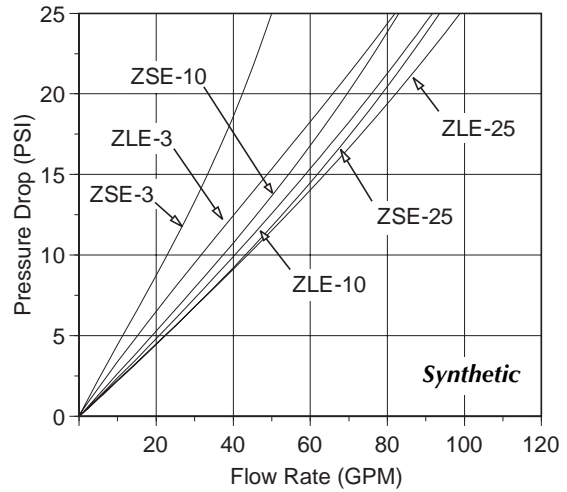
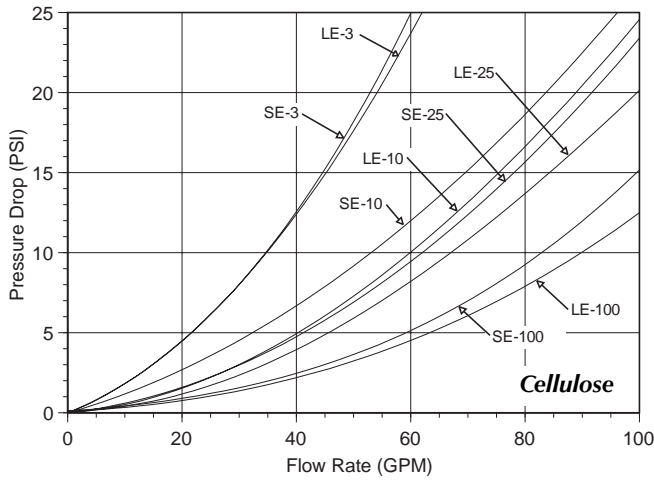
CUSTOM DESIGN FEATURE:

THE FEMALE SOCKET OF THE SF125/165 SERIES CAN BE MACHINED TO ACCEPT A VARIETY OF CUSTOM MADE OR CUSTOMER SUPPLIED STEMS

(ALL OTHER DIMENSIONS SAME AS SF122/162 SERIES.)

**Average Pressure Drop Through Clean Filter Assembly
With 150 SUS Oil At 105° F.**

SPIN-ON FILTERS



HOW TO ORDER:

SF - XXX-XX-XX-XXX-XXX

Code	Inlet & Outlet Ports	Stem/sockets
122	1 1/4" NPTF	Stem
125	1 1/4" NPTF	Socket
162	1 5/8" -12 UN (SAE-20)	Stem
165	1 5/8" -12 UN (SAE-20)	Socket

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

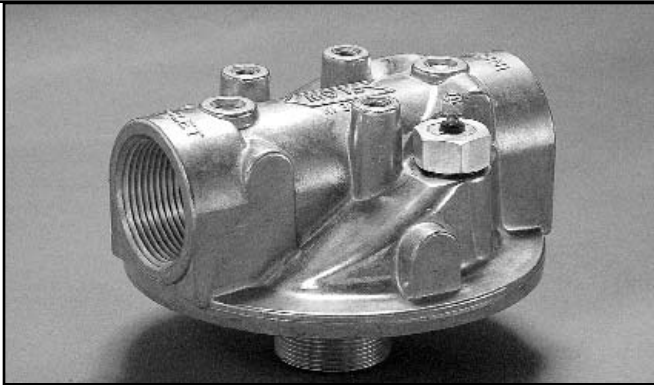
Code	Position 3 Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP03 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Conn..	DP05 series

Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

Code	Position 1 Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP03 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Conn.	DP05 series

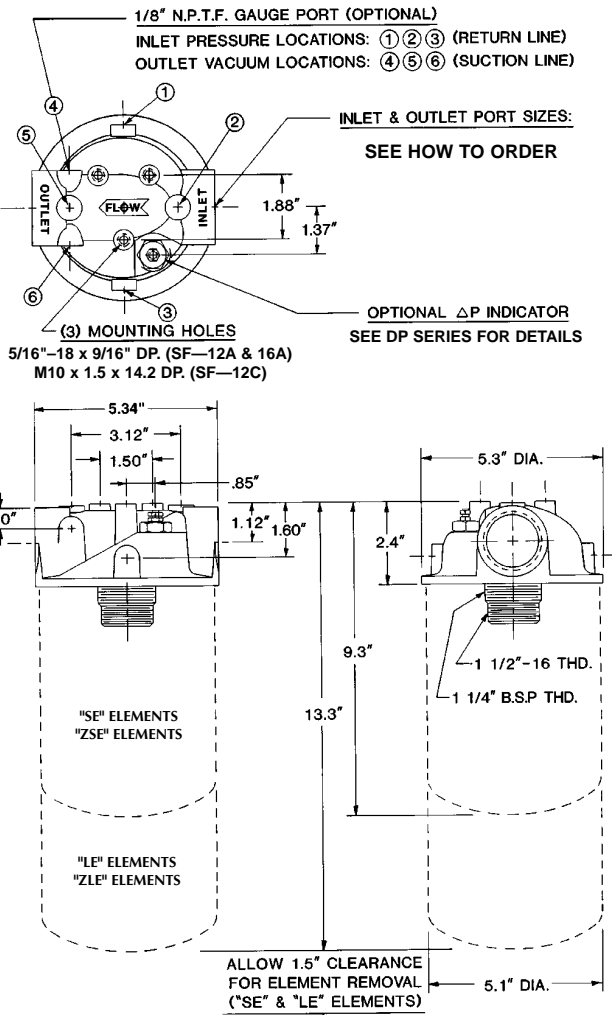
Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27

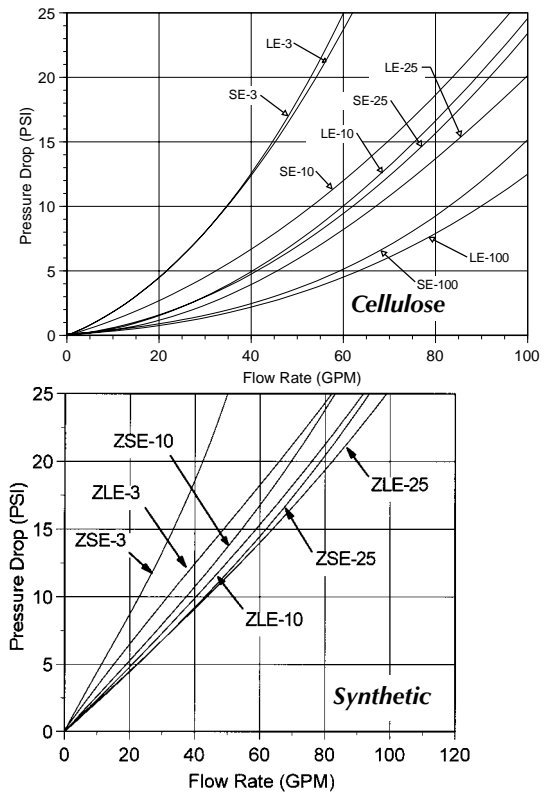


SF-12A & C SERIES SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

- Flows Up To: 70 GPM (Return) 25 GPM (Suction)
- Port Sizes:
 - 1 1/4" NPTF
 - 1 1/4" BSP
 - 1 5/8" - 12 UN (SAE - 20)
- Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
- Temperature: Up to +250° F. Operating
Limited by Indicator Selection
- Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



SPIN-ON FILTERS

HOW TO ORDER:

SF - XXX-XX-X-X-XX

Code	Inlet & Outlet Ports
12A	1 1/4" NPTF
12C	1 1/4" BSP (G 1 1/4"-11)
16A	1 5/8"-12 UN(SAE-20)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

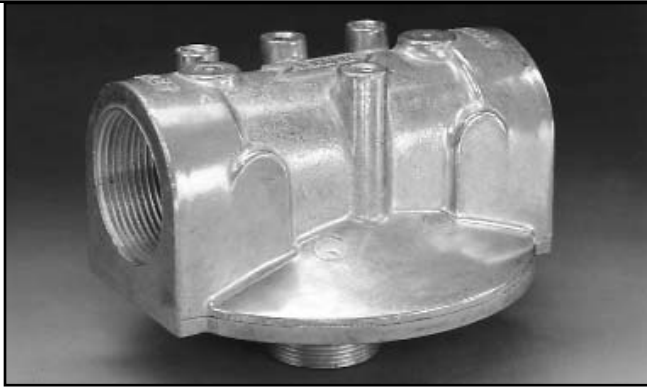
Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

Code	ΔP Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

Code	Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP03 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Conn.	DP05 series

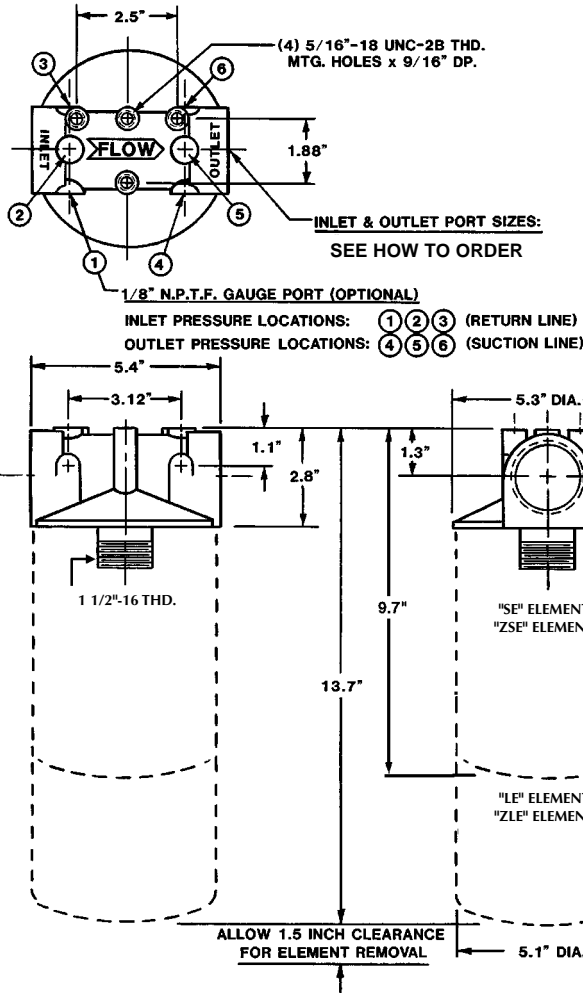
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



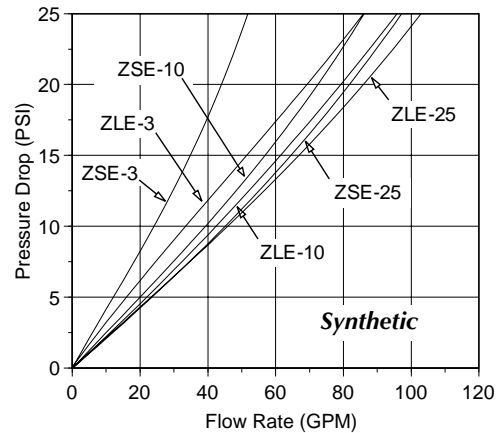
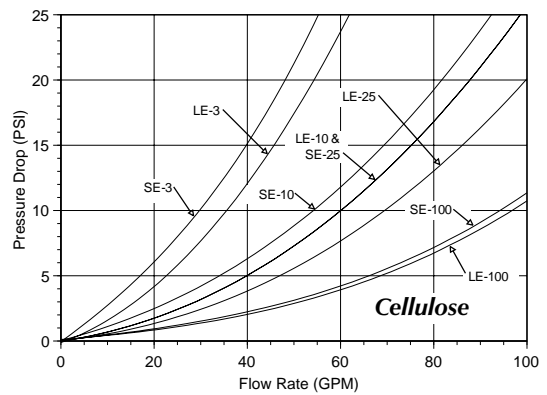


SF-150 SERIES SPIN-ON FILTER HEADS

Flows Up To: 80 GPM (Return) 32 GPM (Suction)
 Port Sizes: • 1 1/2" NPTF
 • 1 7/8" - 12 UN (SAE - 24)
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.



HOW TO ORDER:

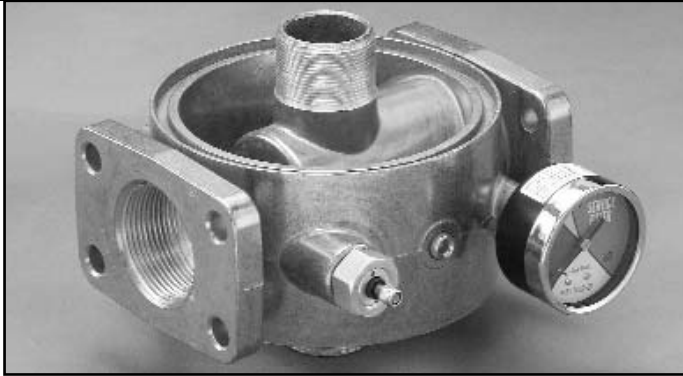
SF - XXX - XX - X

Code	Inlet & Outlet Ports
150	1 1/2" NPTF
180	1 7/8"-12 UN(SAE-24)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

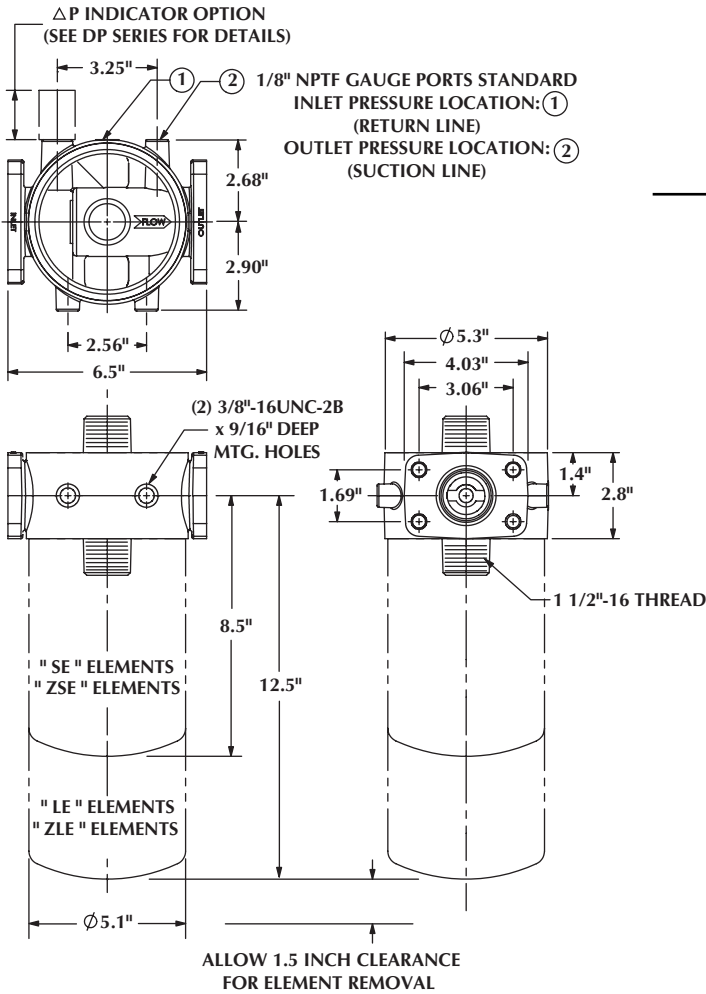
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27



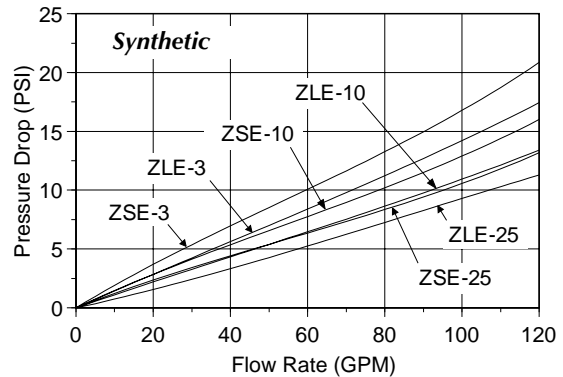
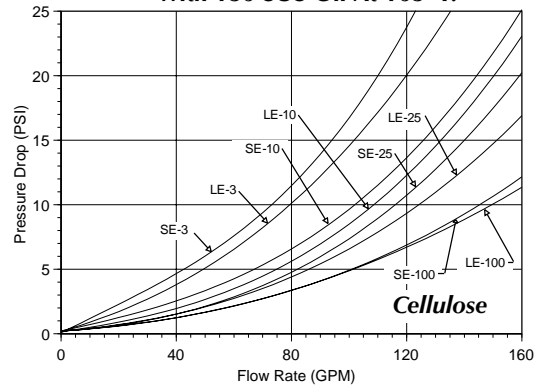
DF-15 SERIES OVER / UNDER SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

Flows Up To: 120 GPM (Return) 50 GPM (Suction)
 Port Sizes: 1 1/2" NPTF
 1 7/8" - 12 UN (SAE - 24)
 2" (4) Bolt Flange
 Pressure: 200 PSI Max. Operating
80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
Limited by Indicator Selection
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

SPIN-ON FILTERS



**Average Pressure Drop Through Clean Filter Assembly
 With 150 SUS Oil At 105° F.**



HOW TO ORDER: DF - XX - XX - 12 - X - XX

Code	Inlet & Outlet Ports
15	2" (4) Bolt Flange & 1 1/2" NPTF Combination
18	1 7/8"-12 (SAE- 24)

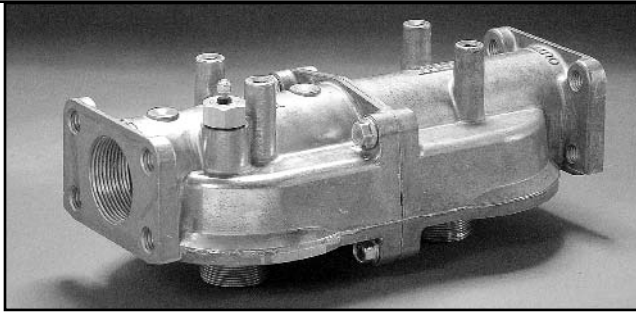
Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

Code	Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP03 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Conn.	DP05 series

SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27

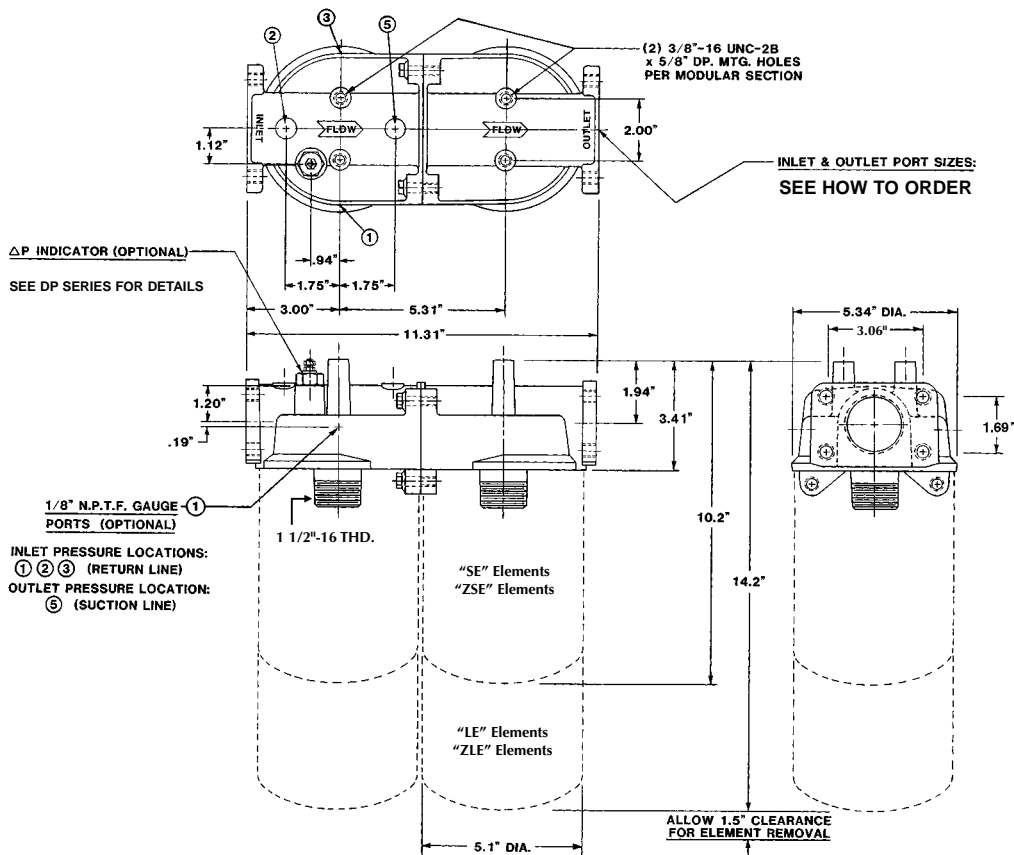




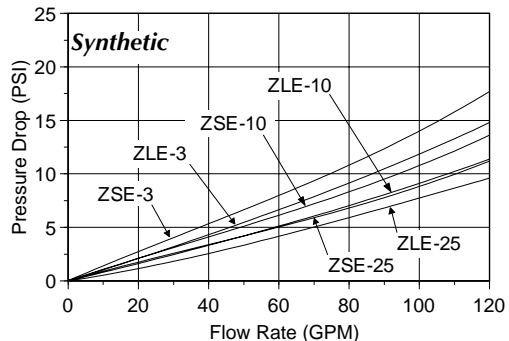
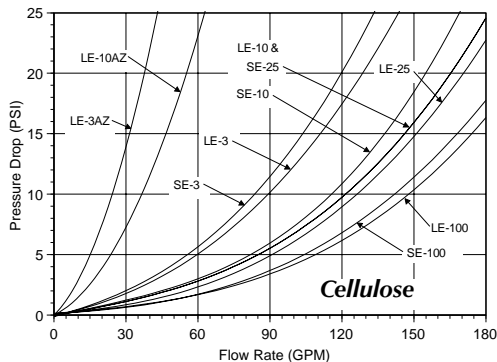
MF SERIES MODULAR LINE TYPE SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

- Flows Up To: 120 GPM (Return) 50 GPM (Suction)
- Port Sizes:
- 1 1/2" NPTF
 - 1 7/8" - 12 UN (SAE - 24)
 - 2" (4) Bolt Flange
- Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
- Temperature: Up to +250° F. Operating
Limited by Indicator Selection
- Applications: Petroleum based fluids only.
Consult factory for synthetic fluids.

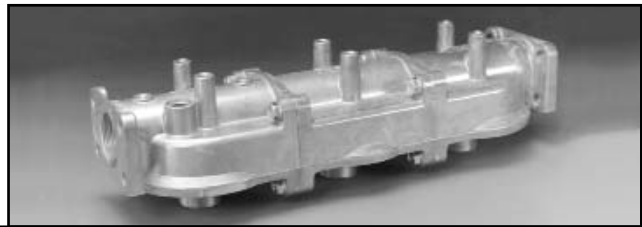
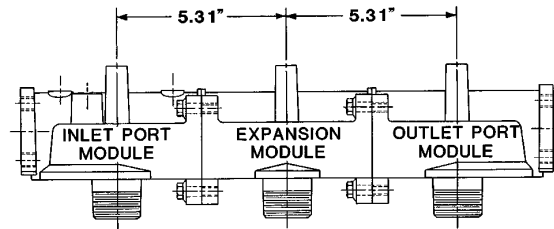
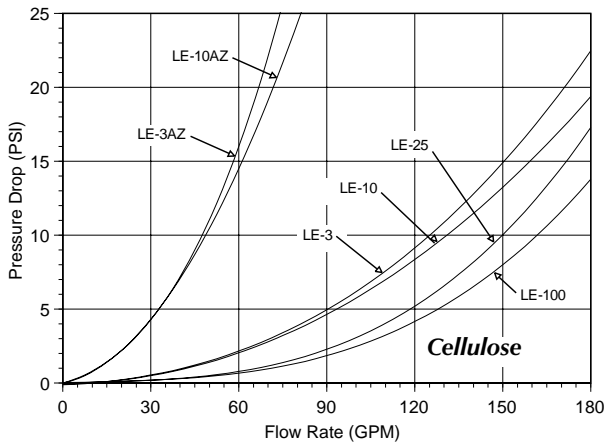
MF-Series filters consist of two or more spin-on filter head modules bolted together to form a complete assembly. Inlet flow is equally divided among all spin-on filter elements (parallel flow). Multiple filter head module design allows filter elements to be manifolded together creating greater flow capacities and longer service life.



Average Pressure Drop Through Clean Filter Assembly
With 150 SUS Oil At 105° F.



3 ELEMENT SPIN-ON FILTER HEAD ASSEMBLY

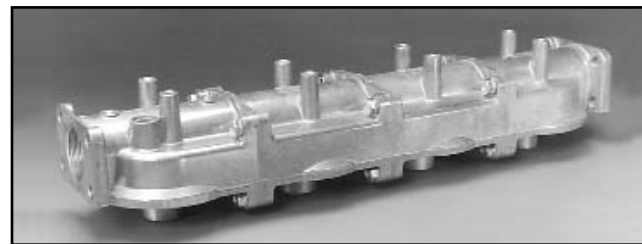
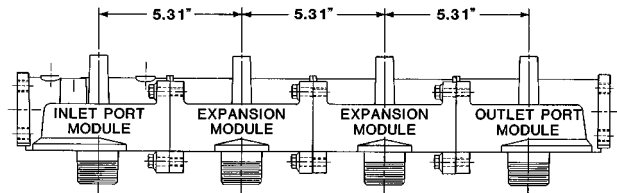


SPIN-ON FILTERS

4 ELEMENT SPIN-ON FILTER HEAD ASSEMBLY

NOTE:

Flow data for a MF-Series 4 element filter head is identical to the 3 element filter above. MF-Series filter heads with 4 or more elements will not significantly reduce pressure drop or allow greater flow through the assembly. The MF Series will lengthen the time periods between element servicing.



HOW TO ORDER:

MF - XX - XX - X - X - X - XX

Code	Inlet & Outlet Port Size & Type
18	1 7/8" - 12 (SAE - 24)
2215	2" (4) Bolt Flange & 1 1/2" NPTF Combination

Code	By-Pass Valve Setting
00	No Valve
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Gauge Port
1, 2, 3, or 5	Location Number As Shown On Drawing

Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

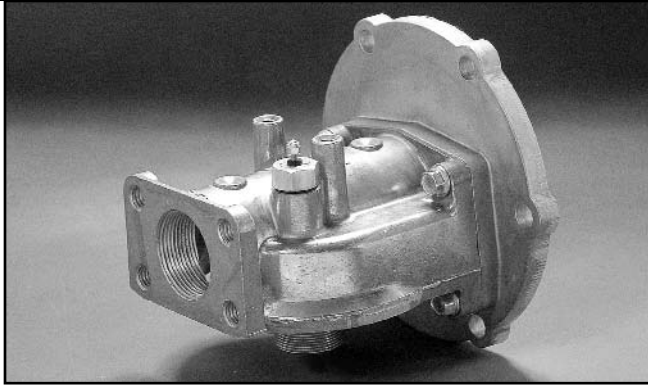
Code	Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP03 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Conn.	DP05 series

Code	No. of Filter Head Modules
2	2 Modules
3	3 Modules
4	4 Modules



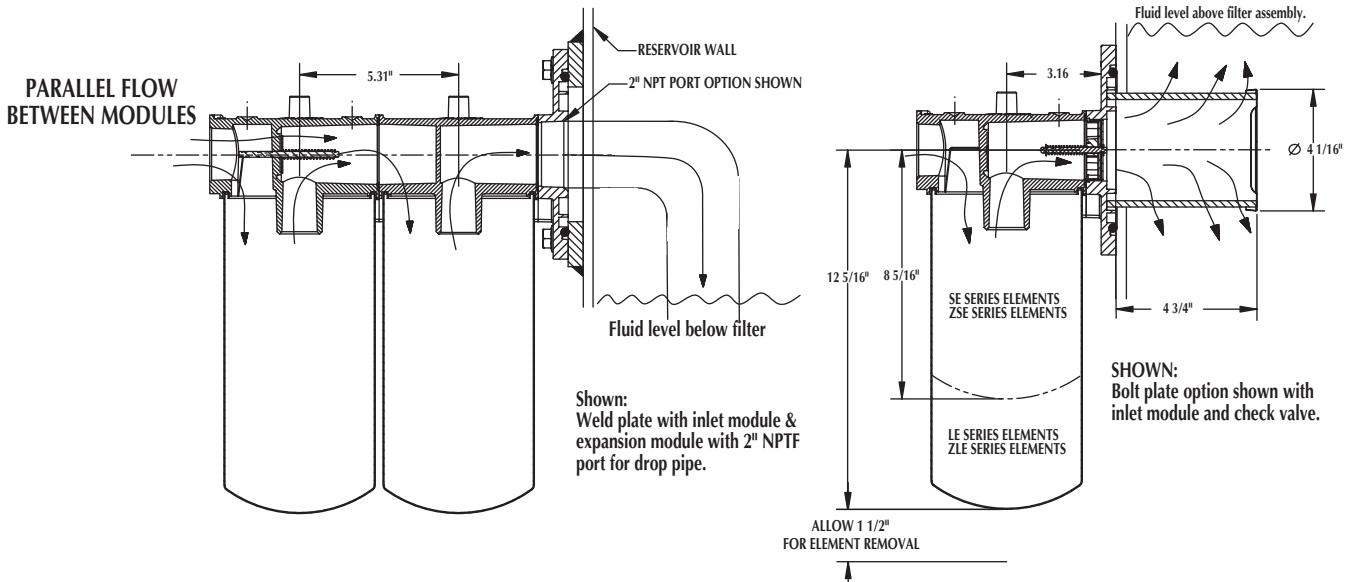
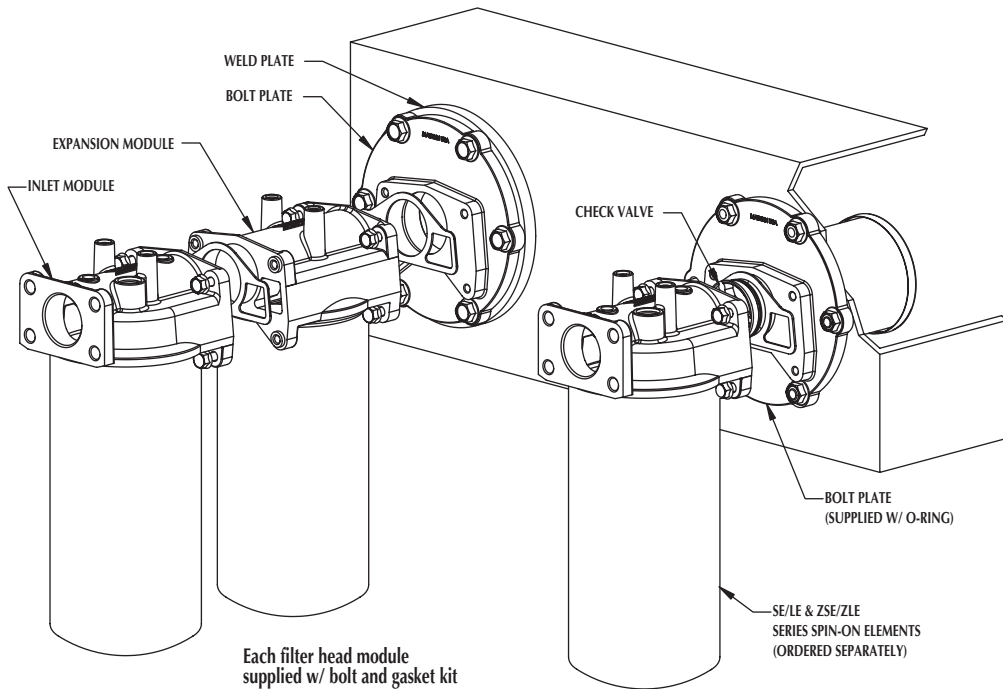
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27

Phone (608) 524-4200 Fax (608) 524-4220 www.zinga.com

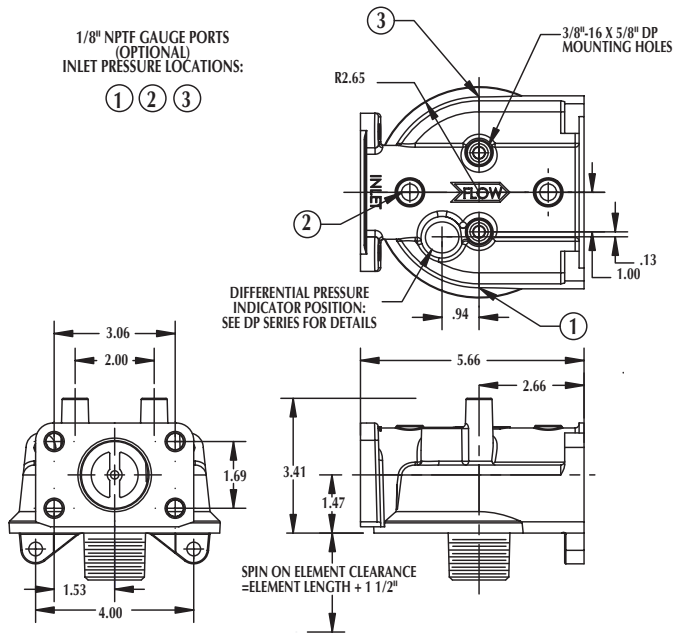


MFT SERIES FLANGE MOUNTED SPIN-ON HEADS WITH ΔP INDICATOR OPTION

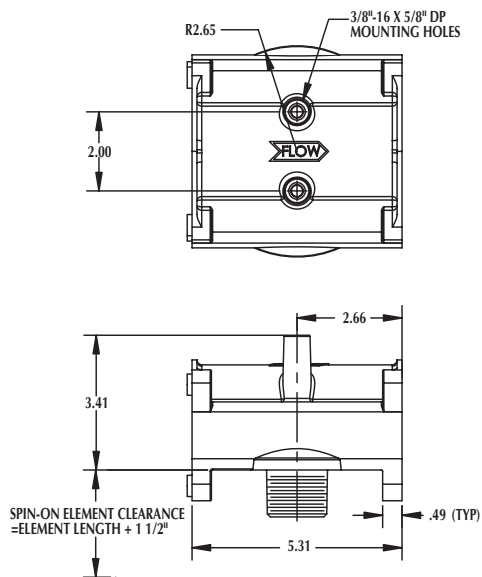
- Flows Up To: 120 GPM (Return)
- Port Sizes:
 - 1 1/2" NPTF
 - 1 7/8" - 12 UN (SAE - 24)
 - 2" (4) Bolt Flange
- Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
- Temperature: Up to +250° F. Operating
Limited by Indicator Selection
- Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.



INLET MODULE

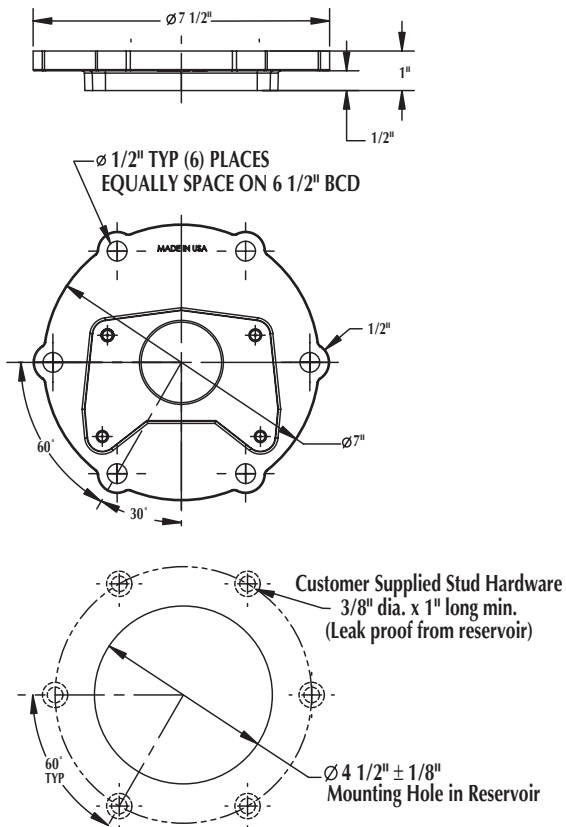


EXPANSION MODULE

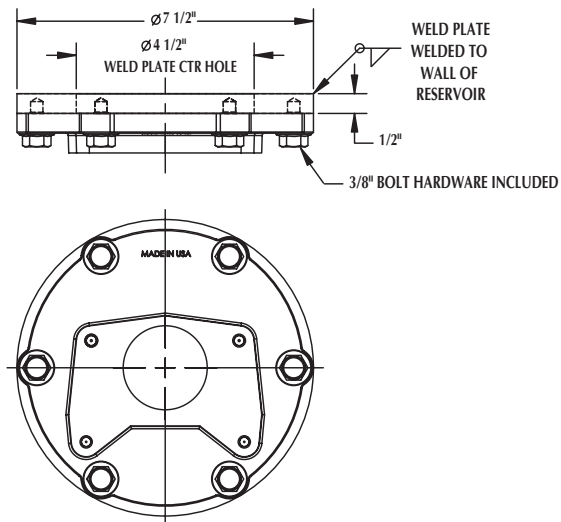


SPIN-ON FILTERS

BOLT PLATE MOUNTING DIMENSIONS

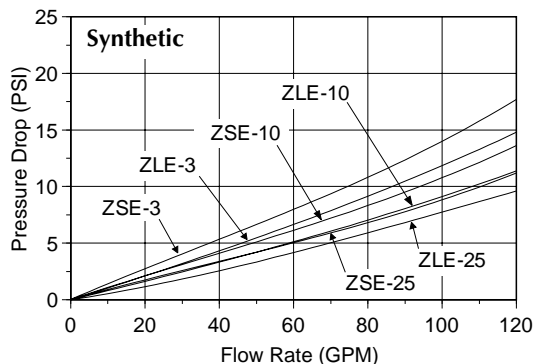
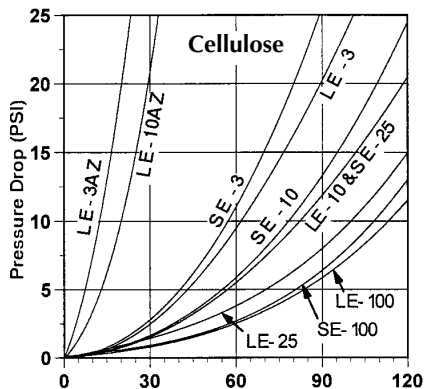


WELD PLATE MOUNTING DIMENSIONS

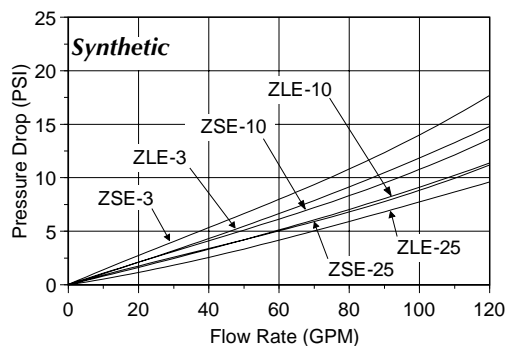
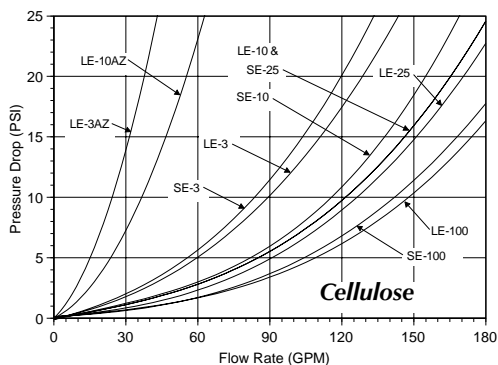


Note: Lubricate Supplied O-ring Seal and Use a Cross Tighten Pattern When Installing Mounting Plate to Reservoir Wall / Weld Collar

Average Pressure Drop Through Clean Single Module Filter Assembly With 150 SUS Oil At 105° F.



Average Pressure Drop Through Clean Double Module Filter Assembly With 150 SUS Oil At 105° F.



HOW TO ORDER: MFT - XX - XX - X - X - X -XX- XXX

Code	Inlet & Outlet Port Size & Type
18S	1 7/8" - 12 (SAE - 24)
2215P	2" (4) Bolt Flange & 1 1/2" NPTF Combination

Code	By-Pass Valve Setting
00	No Valve
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Gauge Port
1, 2, 3	Location Number As Shown On Drawing

Code	No. of Filter Head Modules
1	1 Module
2	2 Modules
3	3 Modules

Code	ΔP Indicator Options
0	No Indicator
V	Visual Indicator (see DP03 series)
D	DC Indicator (see DP06 series)
H	Ele/Visual AC/DC Din Connector (see DP05 series)

Code	Mounting Options
BP0	Bolt plate
BCX	Bolt plate w/ check valve X= pressure setting (1,2,3...7 psid)
BP2	Bolt Plate w/2" NPT Port for drop pipe
BD0	Bolt plate w/ tank diffuser
BDX	Bolt plate w/ check valve & tank diffuser X= pressure setting (1,2,3...7 psid)
WP0	Weld plate (no options)
WCX	Weld plate w/ check valve X=pressure setting (1,2,3...7 psid)
WP2	Weld plate w/ 2" NPT port for drop pipe
WD0	Weld plate w/ tank diffuser
WDX	Weld plate w/ check valve & tank diffuser
000	No plate

Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

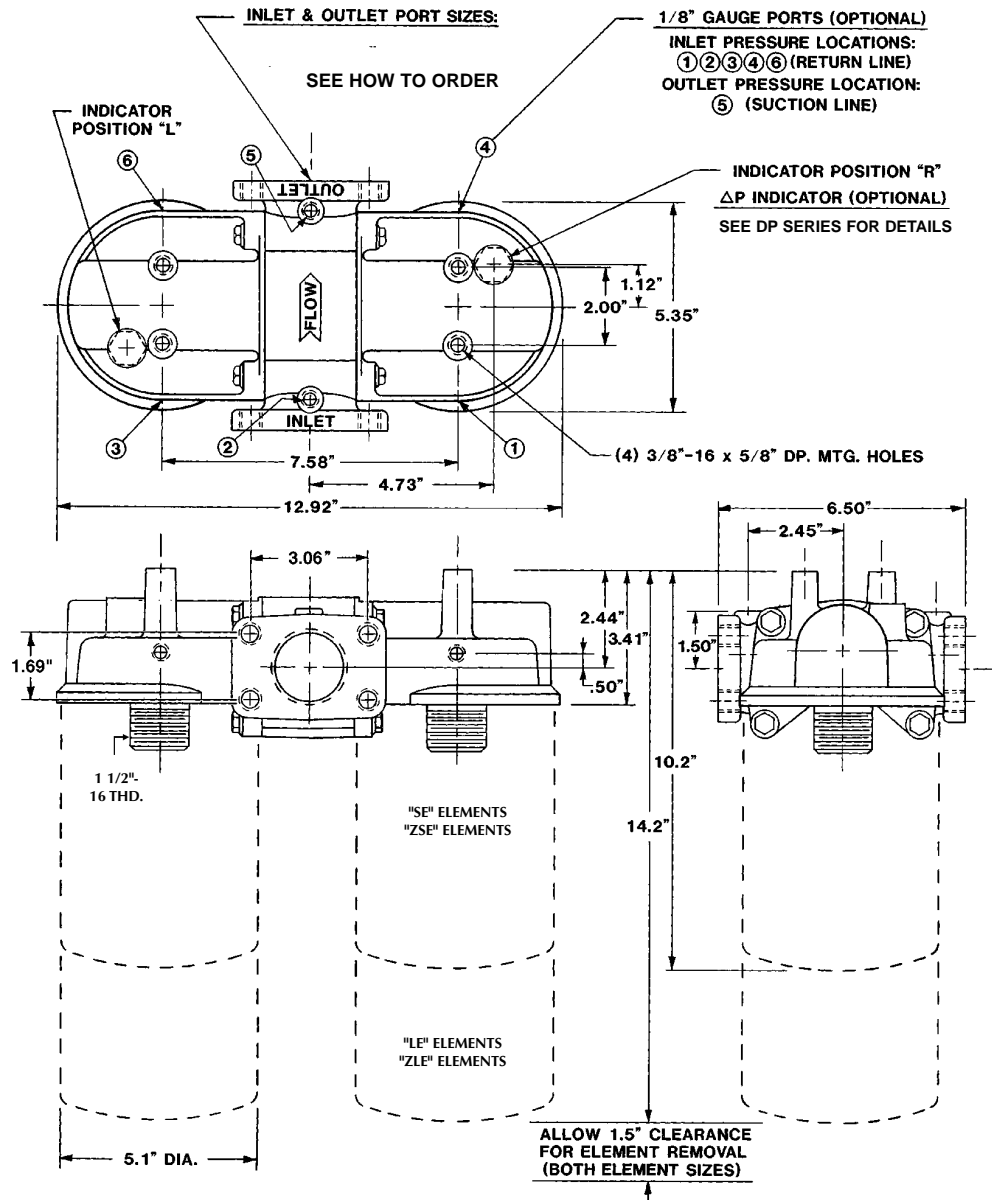
SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27

ZDF SERIES SIDE BY SIDE SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

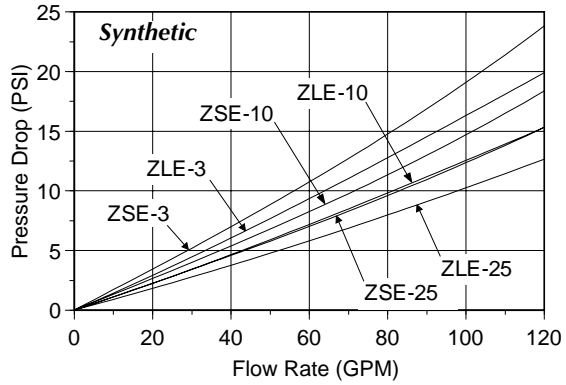
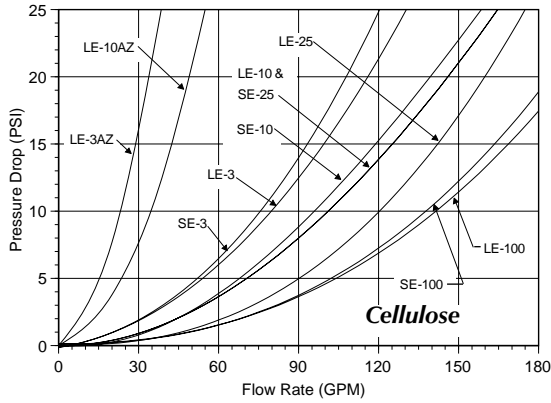


Flows Up To: 120 GPM (Return) 50 GPM (Suction)
 Port Sizes: • 1 1/2" NPTF
 • 1 7/8" - 12 UN (SAE - 24)
 • 2" (4) Bolt Flange
 Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.
 Temperature: Up to +250° F. Operating
Limited by Indicator Selection
 Applications: Petroleum based fluids only.
 Consult factory for synthetic fluids.

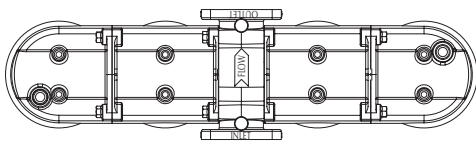
SPIN-ON FILTERS



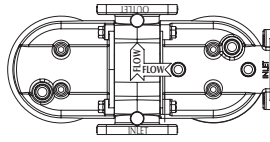
Average Pressure Drop Through Clean Filter Assembly With 150 SUS Oil at 105 °F. Temperature.



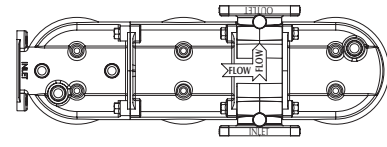
ZDF, MF, & MFT Series parallel flow modular components can be combined into filter head assemblies such as these. Other combinations are available to meet specific filter applications. For technical advice contact your local distributor or the factory.



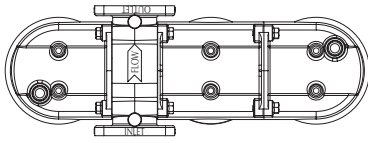
FOUR ELEMENT FILTER HEAD
CONFIGURATION "A"



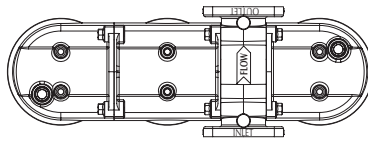
TWO ELEMENT, TWO INLET FILTER HEAD
CONFIGURATION "B"



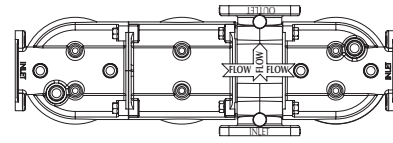
THREE ELEMENT, 90° FILTER HEAD
CONFIGURATION "D"



THREE ELEMENT FILTER HEAD
CONFIGURATION "F"



THREE ELEMENT FILTER HEAD
CONFIGURATION "G"



THREE ELEMENT FILTER HEAD
CONFIGURATION "H"

HOW TO ORDER:

ZDF - XXX - XX - X - XX - XX - X

Code	Port Size & Type
218	1 7/8" - 12 (SAE - 24)
2215	2" (4) Bolt Flange & 1 1/2" NPTF Combination

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

Configuration Option

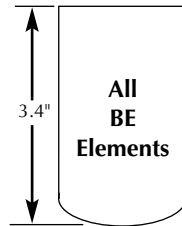
Code	Δ P Indicator Setting
00	No Indicator
04	4 PSID
13	13 PSID
22	22 PSID
44	44 PSID

Code	Indicator Type / Position
00	No Indicator
VL	Visual / L (See DP03 Series)
VR	Visual / R (See DP03 Series)
DL	DC Electrical / L (See DP06 Series)
DR	DC Electrical / R (See DP06 Series)
HL	Vis/Ele DIN / L (See DP05 Series)
HR	Vis/Ele DIN / R (See DP05 Series)

SE, LE, ZSE, & ZLE Element Data: See Pages C26-C27

BE & ZBE SERIES SPIN-ON FILTER ELEMENTS

For Use With BF Series Filter Heads



SPIN-ON FILTERS

Part Number	BE-10-0	BE-10-18	BE-25-10	BE-25-25	BE-40-0	BE-40-18	ZBE-10-18
Diameter	3.05"	3.05"	3.05"	3.05"	3.05"	3.05"	3.05"
Mounting Thread	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16	3/4" - 16
Micron Rating	10	10	25	25	40	40	10
Avg. Beta	2	2	2	2	2	2	75
By-Pass Valve	None	18 PSI	10 PSI	25 PSI	NONE	18 PSI	18 PSI
Can Color / Imprint	White/Red	White/Red	White/Black	White/Black	White/Black	White/Black	White/Red

Application Data:

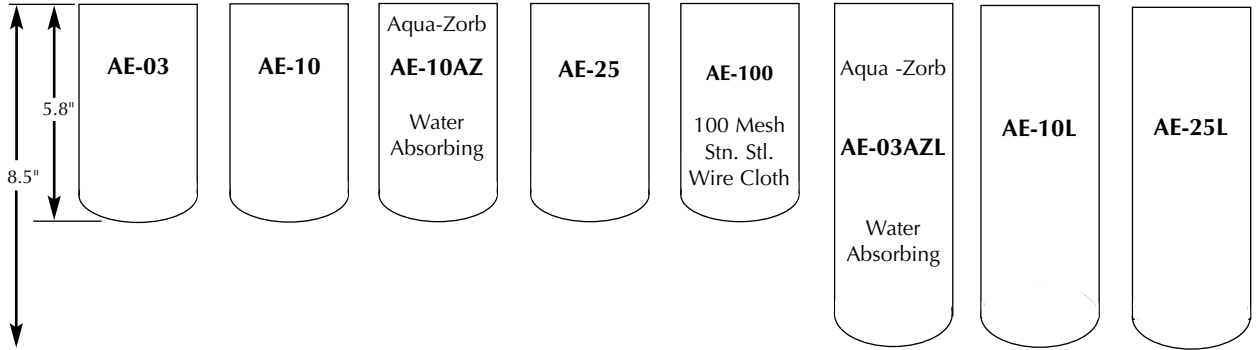
- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 200 PSI All Models.
- "Z-Glass" Media (ZBE-10-18)
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- **Caution:** Do **not** use BE and ZBE Series filter elements on internal combustion engines.



AE SERIES SPIN-ON FILTER ELEMENTS

For Use With ZAF Series Filter Heads

SPIN-ON FILTERS



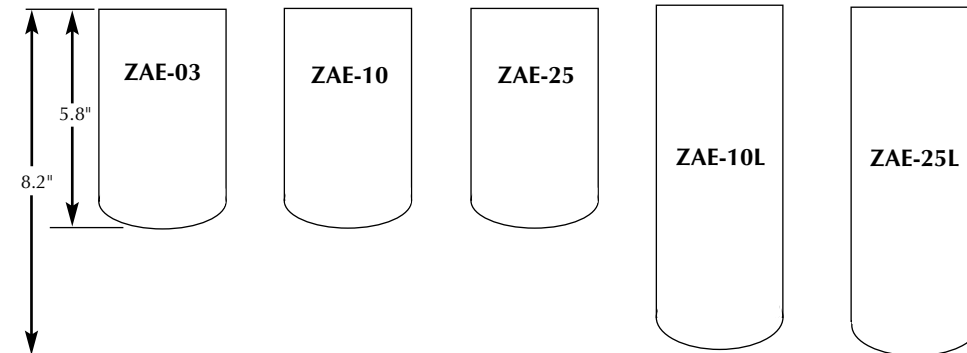
Part Number	AE-03	AE-10	AE-10AZ	AE-25	AE-100	AE-03AZL	AE-10L	AE-25L
Diameter	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"
Mounting Thread	1" - 12	1" - 12	1" - 12	1" - 12	1" - 12	1" - 12	1" - 12	1" - 12
Micron Rating (Nominal)	3 Micron	10 Micron	10 Micron	25 Micron	141 Micron	3 Micron	10 Micron	25 Micron
Beta 2/20/75(See Below)	2/5/-- Micron	9/22/24 Micron	8/25/30 Micron	29/46/54 Micron		5/21/23 Micron	9/22/24 Micron	29/46/54 Micron
Filter Media Area	420 Sq. In.	547 Sq. In.	175 Sq. In.	547 Sq. In.	91 Sq. In.	309 Sq. In.	947 Sq. In.	947 Sq. In.
Water Holding Capacity	-----	-----	4.1 oz.	-----	-----	7.2 oz.	-----	-----
Can Color / Imprint	White/Black	White/Red	White/Orange	White/Black	White/Blue	White/Orange	White/Red	White/Black

Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 250 PSI All Models.
 - Warning: 80 PSI ΔP max. without by-pass valve in filter head.**
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- **Caution:** Do not use AE Series filter elements on internal combustion engines.

ZAE SERIES SYNTHETIC MEDIA SPIN-ON FILTER ELEMENTS

For Use With ZAF Series Filter Heads



SPIN-ON FILTERS

Part Number	ZAE-03	ZAE-10	ZAE-25	ZAE-10L	ZAE-25L
Diameter	3.8"	3.8"	3.8"	3.8"	3.8"
Mounting Thread	1" - 12	1" - 12	1" - 12	1" - 12	1" - 12
Micron Rating (Nominal)	3 Micron	10 Micron	25 Micron	10 Micron	25 Micron
Beta 2/20/75 (See Below)	2/3/4	4/10/12	8/25/30	4/10/12	8/25/30
Filter Media Area	366 Sq. In.	366 Sq. In.	366 Sq. In.	562 Sq. In.	562 Sq. In.
Can Color / Imprint	White/Green	White/Red	White/Black	White/Red	White/Black

Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 250 PSI All Models.
 - Warning: 80 PSI ΔP max. without by-pass valve in filter head.**
- "Z-Glass" Media
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- Caution:** Do not use ZAE Series filter elements on internal combustion engines.

SE & LE SERIES SPIN-ON FILTER ELEMENTS

For Use With SF, DF, MF, MFT & ZDF Series Filter Heads

SPIN-ON FILTERS

	6.9"	SE-03	SE-10	SE-25	SE-100 100 Mesh Stn. Stl. Wire Cloth
Part Number		SE-03	SE-10	SE-25	SE-100
Diameter		5.1"	5.1"	5.1"	5.1"
Mounting Thread		1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16
Micron Rating		3 Micron	10 Micron	25 Micron	141 Micron
Beta 2/20/75 (See Below)		3/10/22	9/22/24	29/46/54	-----
Filter Media Area		850 Sq. In.	950 Sq. In.	950 Sq. In.	200 Sq. In.
Can Color / Imprint		White/Green	White/Red	White/Black	White/Blue

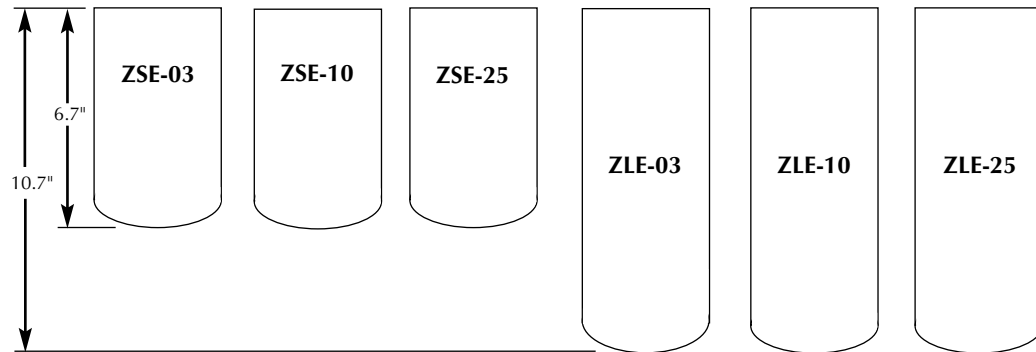
	10.9"	LE-03	Aqua-Zorb LE-03AZ Water Absorbing	LE-10	Aqua-Zorb LE-10AZ Water Absorbing	LE-25	LE-100 100 Mesh Stn. Stl. Wire Cloth
Part Number		LE-03	LE-03AZ	LE-10	LE-10AZ	LE-25	LE-100
Diameter		5.1"	5.1"	5.1"	5.1"	5.1"	5.1"
Mounting Thread		1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16
Micron Rating (Nominal)		3 Micron	3 Micron	10 Micron	10 Micron	25 Micron	141 Micron
Beta 2/20/75 (See Below)		3/10/22	5/21/23	10/22/33	8/25/30	29/46/54	-----
Filter Media Area		1170 Sq. In.	648 Sq. In.	1710 Sq. In.	648 Sq. In.	1710 Sq. In.	380 Sq. In.
Water Holding Capacity		-----	15 oz.	-----	15 oz.	-----	-----
Can Color / Imprint		White/Green	White/Orange	White/Red	White/Orange	White/Black	White/Blue

Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 200 PSI All Models.
Warning: 80 PSI ΔP max. without by-pass valve in filter head.
- Operating Temperature: -65 to +250° F.
- Application: Suitable for petroleum based fluids only. Consult factory for synthetic fluids.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- Consult local distributor or factory for SE & LE Element interchange with those of other manufacturers.
- **Caution:** Do not use SE & LE Series filter elements on internal combustion engines.

ZSE & ZLE SERIES SYNTHETIC MEDIA SPIN-ON FILTER ELEMENTS

For Use With SF, DF, MF, MFT & ZDF Series Filter Heads



SPIN-ON FILTERS

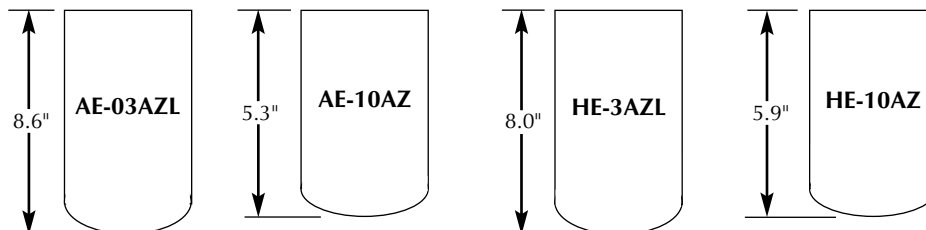
Part Number	ZSE-03	ZSE-10	ZSE-25	ZLE-03	ZLE-10	ZLE-25
Diameter	5.1"	5.1"	5.1"	5.1"	5.1"	5.1"
Mounting Thread	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16
Micron Rating (Nominal)	3 Micron	10 Micron	25 Micron	3 Micron	10 Micron	25 Micron
Beta 2/20/75 (See Below)	2/3/4	4/10/12	8/25/30	2/3/4	4/10/12	8/25/30
Filter Media Area	680 Sq. In.	561 Sq. In.	673 Sq. In.	1260 Sq. In.	1041 Sq. In.	1246 Sq. In.
Can Color / Imprint	White/Green	White/Red	White/Black	White/Green	White/Red	White/Black

Application Data:

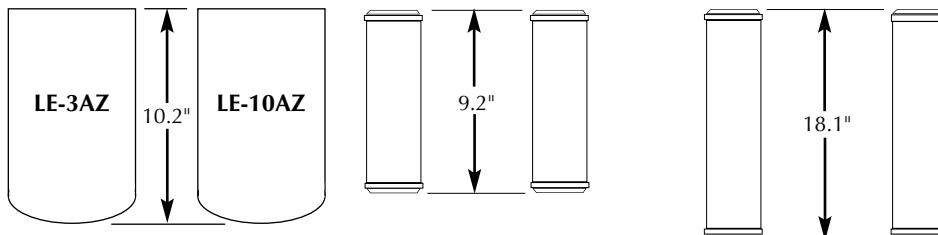
- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 200 PSI All Models.
 - Warning: 80 PSI ΔP max. without by-pass valve in filter head.**
- "Z-Glass" Media
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- Caution:** Do not use ZSE/ZLE Series filter elements on internal combustion engines.

AQUA-ZORB™ FILTER ELEMENTS

*For removal of both water and dirt contaminants from petroleum base fluids and fuels.
Hydroscopic media absorbs up to 30 times its weight in water.*



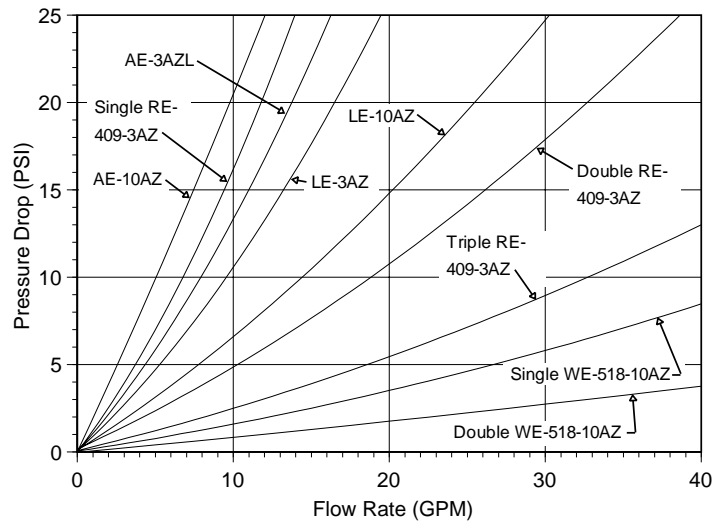
Part Number	AE-03AZL	AE-10AZ	HE-3AZL	HE-10AZ
Diameter	3.8"	3.8"	3.8"	3.8"
Mounting Thread	1" - 12	1" - 12	1 1/2" - 16	1 1/2" - 16
Micron Rating (Nominal)	3 Micron	10 Micron	3 Micron	10 Micron
Beta 2/20/75	5/21/23	8/25/30	5/21/23	8/23/30
Filter Media Area	309 Sq. In.	175 Sq. In.	238 Sq. In.	144 Sq. In.
Water Holding Capacity	7.2 oz.	4.1 oz.	5.5 oz.	3.4 oz.
Max. Operating Pressure	250 PSI	250 PSI	700 PSI	700 PSI
Can Color Imprint	White/Orange	White/Orange	White/Orange	White/Orange
For Use With Filter Head Series	ZAF		HF	



Part Number	LE-3AZ	LE-10AZ	RE-409-3AZ	SRE-409-10AZ	WE-518-3AZ	WE-518-10AZ
Diameter	5.1"	5.1"	3.9"	3.9"	5.0"	5.0"
Mounting Thread/ I.D.	1 1/2" - 16	1 1/2" - 16	1.96"	1.61"	3.34"	3.34"
Micron Rating (Nominal)	3 Micron	10 Micron	3 Micron	10 Micron	3 Micron	10 Micron
Beta 2/20/75	5/21/23	8/25/30	5/21/23	8/25/30	5/21/23	8/25/30
Filter Media Area	648 Sq. In.	648 Sq. In.	461 Sq. In.	461 Sq. In.	1250 Sq. In.	1250 Sq. In.
Water Holding Capacity	15 oz.	15 oz.	11 oz.	11 oz.	29 oz.	29 oz.
Max. Operating Pressure	200 PSI	200 PSI	TR - 100 PSI RF - 100 PSI WF - 500 PSI	100 PSI	300 PSI	300 PSI
Can Color Imprint	White/Orange	White/Orange	Cartridge	Cartridge	Cartridge	Cartridge
For Use With Filter Head Series	SF, DF, MF, ZDF		RF, WF, TR	SRF, TS	WF-2	

SPIN-ON FILTERS

Average Pressure Drop Through Clean Filter With 150 SUS Oil At 105° F Temp.



Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: As noted in chart.
 - Warning: 80 PSI ΔP max. without by-pass valve in filter assembly.**
- Operating Temperature: -65 to +212° F.
- All petroleum base fluids and fuels.
- **Caution:** Do not use Aqua-Zorb™ filter elements on internal combustion engines.

Design Features:

Aqua-Zorb™ filter medias with either 3 or 10 Micron filtration absorb and retain free or emulsified water. Any absorbed water can not be liberated from the Aqua-Zorb™ media. As the element becomes saturated with water the Aqua-Zorb™ media continues to swell, and will ultimately curtail flow through the filter.



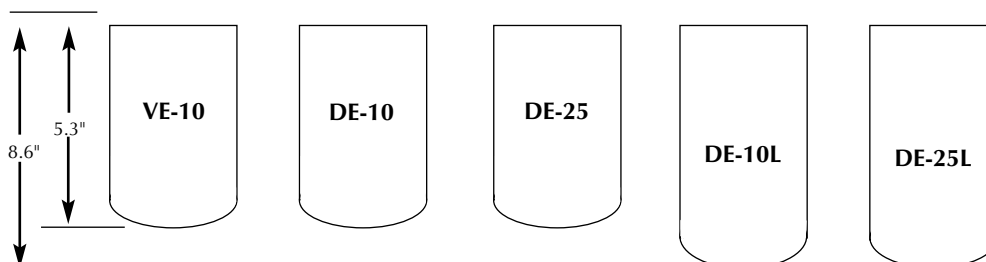
DE & VE SERIES SPIN-ON ELEMENTS

DE Series: Interchangeable replacements for Donaldson, Char-Lynn, and others.

A stem bushing is available to convert the ZAF head stem to accept DE Series Elements.

VE Series: For use with Zinga VAF Series filter heads or as interchangeable replacements for Cessna, Lenz, Racine, Vickers, and others.

SPIN-ON FILTERS



Part Number	VE-10	DE-10	DE-25	DE-10L	DE-25L
Diameter	3.7"	3.7"	3.7"	3.7"	3.7"
Mounting Thread	1 1/8" - 16	1 1/4" - 12	1 1/4" - 12	1 1/4" - 12	1 1/4" - 12
Micron Rating (Nominal)	10 Micron	10 Micron	25 Micron	10 Micron	25 Micron
Beta 2/20/75	9/22/24	9/22/24	25/44/54	9/22/24	25/44/54
Filter Media Area	547 Sq. In.	547 Sq. In.	547 Sq. In.	947 Sq. In.	947 Sq. In.
Can / Color Imprint	White/Red	White/Red	White/Black	White/Red	White/Black

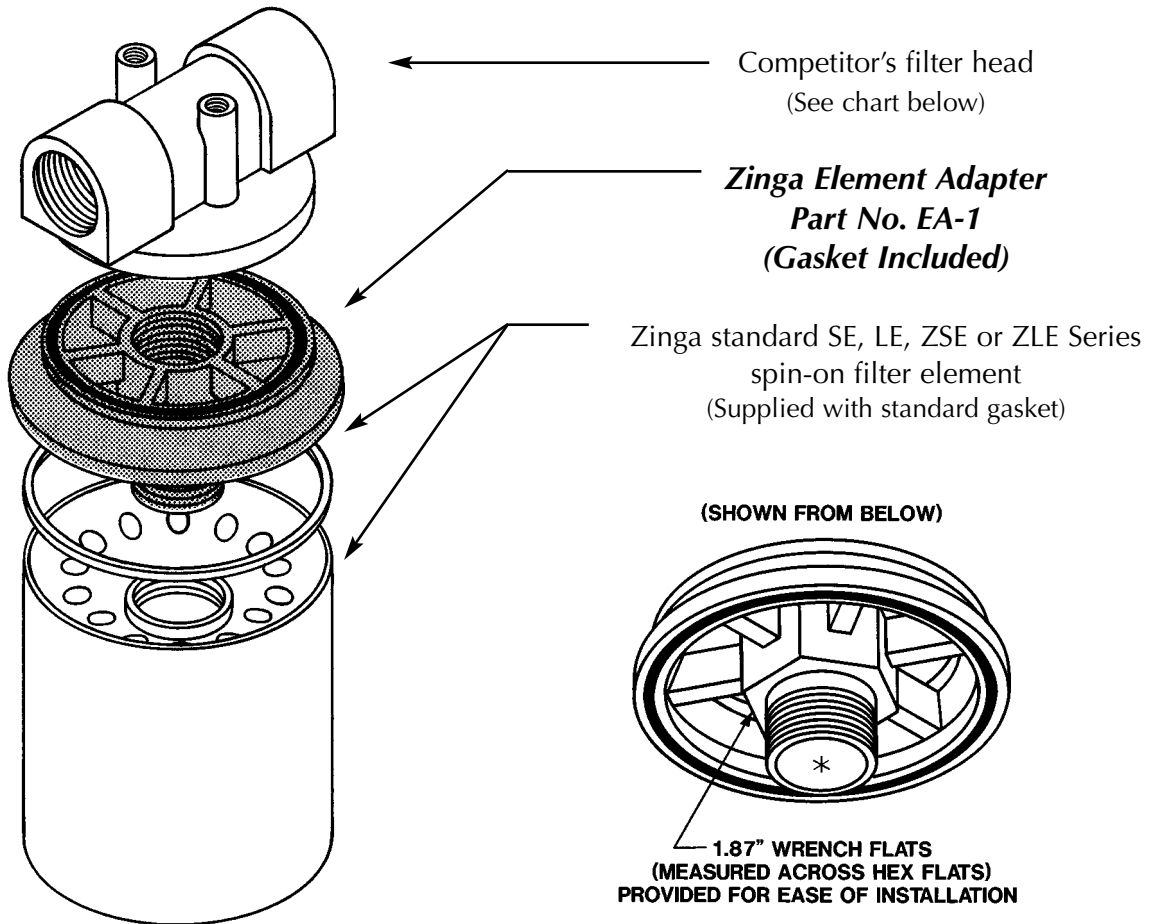
Application Data:

- Maximum Operating Pressure: 250 PSI All Models.
Warning: 80 PSI ΔP max. without by-pass valve in filter head.
- Operating Temperature: -65 to +250° F.
Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
Beta_x Rating of 20 = 95% Efficiency
Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Caution:** Do not use DE or VE Series filter elements on internal combustion engines.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.



SPIN-ON FILTER ELEMENT ADAPTER FILTER PART NO. EA-1

Convert foreign made, five inch (5") diameter spin-on filter heads marketed by manufacturers listed below to accept Zinga SE, LE, ZSE or ZLE spin-on elements.



SPIN-ON FILTERS

Interchange Chart
With The Addition Of EA-1 Element Adapter

Manufacturer	Filter Head Series	Part Number	Zinga Part Number
Canflo	CFRS-55 & CFRS-105	RSE-55-3	SE-3 or LE-3
		RSE-55-10	SE-10 or LE-10
		RSE-55-25	SE-25 or LE-25
Lenz	CP-1250	CP-1252-10-55	SE-10 or LE-10
LHA	SP52 & SP102	SPE52-10	SE-10 or LE-10
		SPE52-25	SE-10 or LE-10
		SPE52-125	SE-25 or LE-25
Parker	50-PS	21169	SE-10 or LE-10
UCC	UC-MX-1591 & UC-MX-1720	UC-MX-1591-4-10	SE-10 or LE-10
		UC-MX-1591-4-25	SE-10 or LE-10
		UC-MX-1591-4-125	LE-100 (100 Mesh)
Fleetguard	-----	HF-6177	SE-10

- The addition of the EA-1 element adapter to any filter head listed above will convert it to accept any Zinga SE, LE, ZSE or ZLE Series spin-on filter element.
- When using Zinga SE, LE, ZSE or ZLE elements the element adapter adds only 3/4" of length the original filter assembly.



This head will accept either *Gresen* or *Cross* spin-on filter elements.

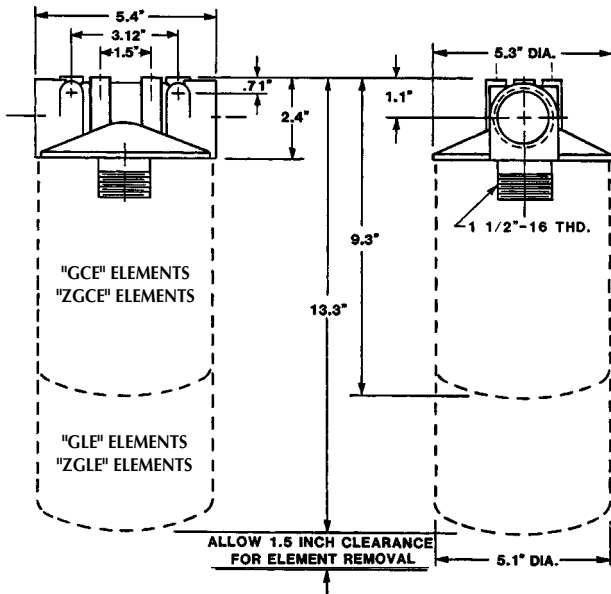
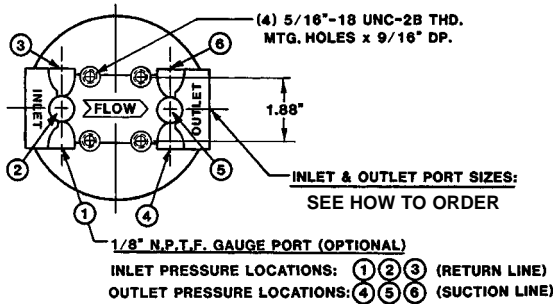
GF-120 SERIES SPIN-ON FILTER HEADS GRESEN & CROSS DIRECT INTERCHANGE

Flows Up To: 70 GPM (Return) 25 GPM (Suction)

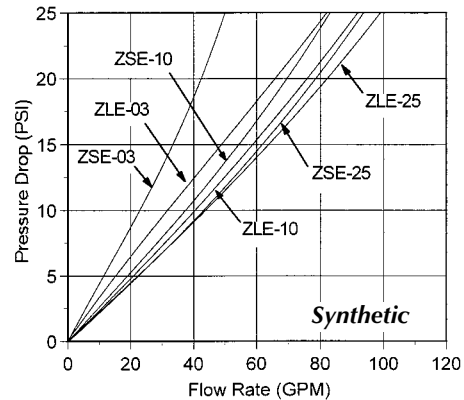
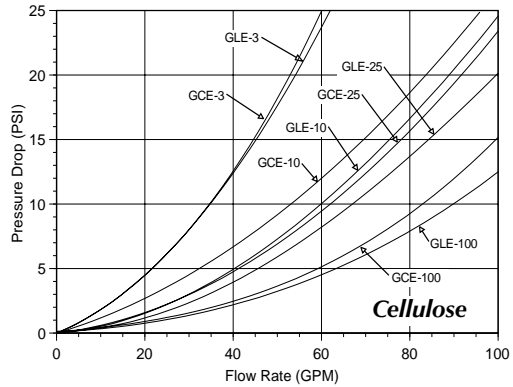
Port Sizes: • 1 1/4" NPTF
• 1 5/8" - 12 UN (SAE - 20)

Pressure: 200 PSI Max. Operating
Warning: 80 PSI ΔP max. without by-pass valve.

Temperature: Up to +250° F. Operating
Applications: Petroleum based fluids only.
Consult factory for synthetic fluids.



Average Pressure Drop Through Clean Filter Assembly
With 150 SUS Oil At 105° F.



HOW TO ORDER:

GF - XXX - XX - X

Code	Inlet & Outlet Ports
120	1 1/4" NPTF
160	1 5/8"-12 UN(SAE-20)

Code	By-Pass Valve Setting
00	No By-Pass
03	3 PSI
05	5 PSI
15	15 PSI
25	25 PSI
50	50 PSI

Code	Gauge Port Location
0	No Port Required
Location Number	As Shown Above

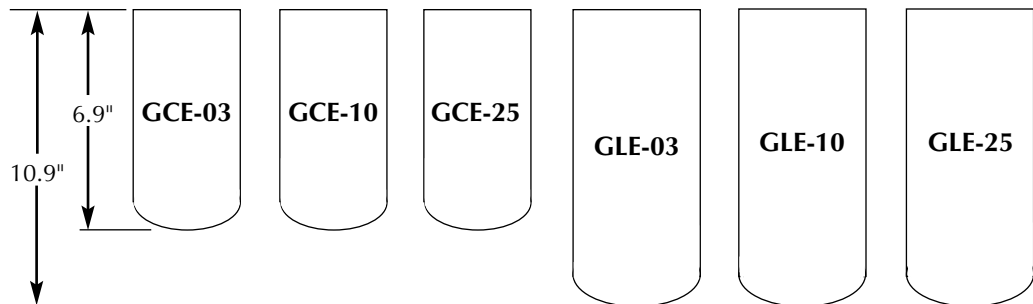
GCE, GLE, ZGCE, & ZGLE Element Data: See Pages C33-C34



GCE & GLE SERIES SPIN-ON FILTER ELEMENTS

*Interchangeable replacements for
Gresen, Cross, and others listed below.*

For use with GF series filter heads



Part Number	GCE-03	GCE-10	GCE-25	GLE-3	GLE-10	GLE-25
Diameter	5.1"	5.1"	5.1"	5.1"	5.1"	5.1"
Mounting Thread	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16
Micron Rating (Nominal)	3 Micron	10 Micron	25 Micron	3 Micron	10 Micron	25 Micron
Beta 2/20/75 (See Below)	3/10/22	9/22/24	29/46/54	3/10/22	9/22/24	29/46/54
Filter Media Area	850 Sq. In.	950 Sq. In.	950 Sq. In.	1170 Sq. In.	1710 Sq. In.	1710 Sq. In.
Can Color / Imprint	White/Green	White/Red	White/Black	White/Green	White/Red	White/Black

Cross References:

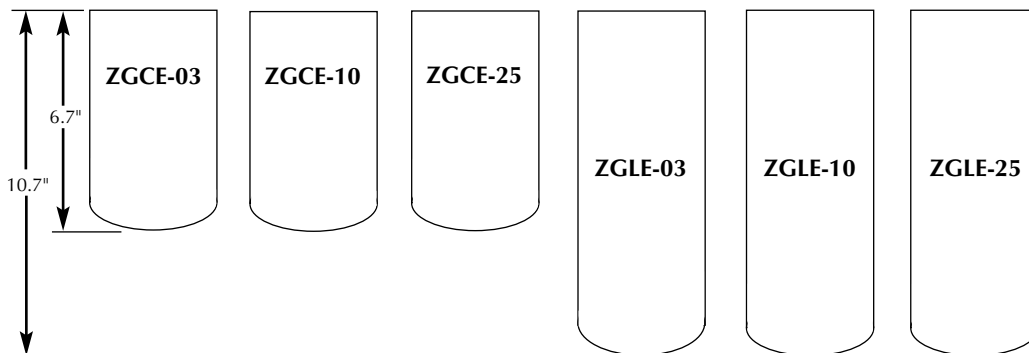
Brand	Part Number	Zinga Part Number
Cross	1A-9251	GCE-10
	1A-9253	GCE-25
Gresen	K-23018	GCE-10
	K-23019	GCE-25
	7520-001	GCE-10
	7521-001	GCE-25

Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 200 PSI - All Models.
- **Warning: 80 PSI ΔP max. without by-pass valve in filter head.**
- Operating Temperatures: -65 to +250 ° F.
- Petroleum based fluids only. Consult factory for synthetic fluids
- Filter Gasket Part No. FG-02 is supplied standard with GCE & GLE series elements. Zinga SE & LE Series elements can be converted to GCE & GLE equivalents by replacing the standard gasket with a FG-02 gasket.
- *Pressure drop vs. flow data* for GCE & GLE series filter elements is identical to that of the standard Zinga SE & LE Series elements.
- **Caution:** Do not use GCE & GLE Series filter elements on internal combustion engines.

ZGCE & ZGLE SERIES SYNTHETIC MEDIA SPIN-ON FILTER ELEMENTS

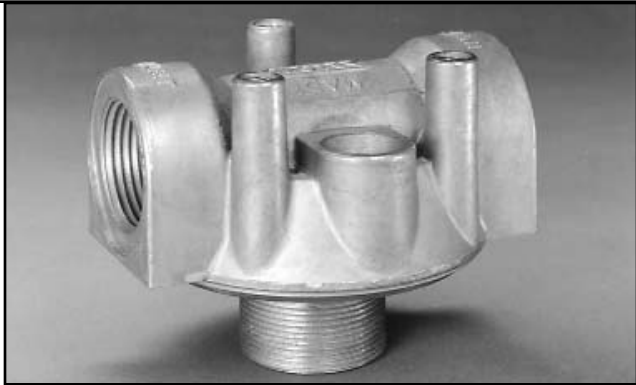
For Use With GF Series Filter Heads



Part Number	ZGCE-03	ZGCE-10	ZGCE-25	ZGLE-03	ZGLE-10	ZGLE-25
Diameter	5.1"	5.1"	5.1"	5.1"	5.1"	5.1"
Mounting Thread	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16
Micron Rating (Nominal)	3 Micron	10 Micron	25 Micron	3 Micron	10 Micron	25 Micron
Beta 2/20/75 (See Below)	2/3/4	4/10/12	8/25/30	2/3/4	4/10/12	8/25/30
Can Color / Imprint	White/Green	White/Red	White/Black	White/Green	White/Red	White/Black

Application Data:

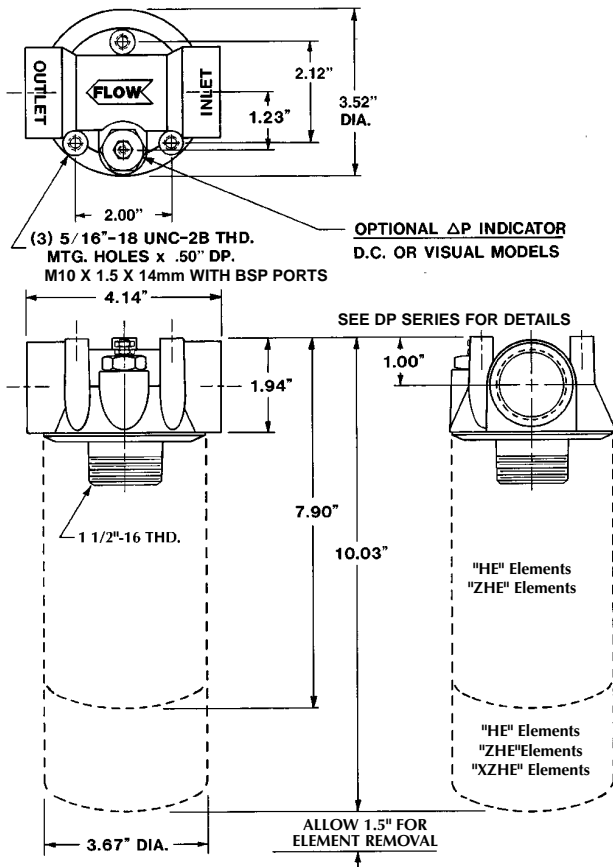
- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum Operating Pressure: 200 PSI All Models.
Warning: 80 PSI ΔP max. without by-pass valve in filter head.
- "Z-Glass" Media
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Filter Gasket Part No. FG-02 is supplied standard with GCE & GLE series elements. Zinga SE & LE Series elements can be converted to GCE & GLE equivalents by replacing the standard gasket with a FG-02 gasket.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- **Caution:** Do not use ZGCE/ZGLE Series filter elements on internal combustion engines.



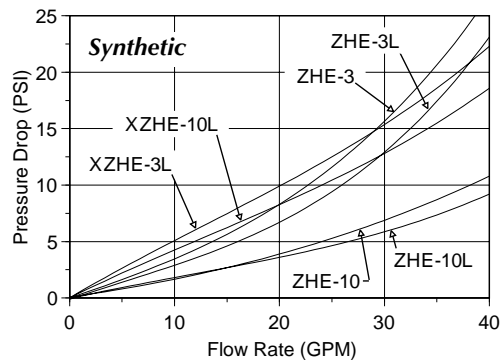
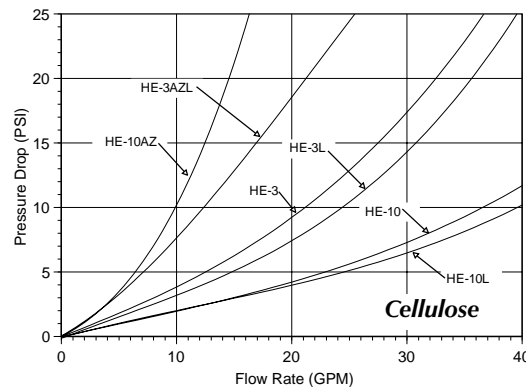
HF SERIES SPIN-ON FILTER HEADS WITH ΔP INDICATOR OPTION

- Flows Up To: 40 GPM (Return)
- Port Sizes:
- 3/4" NPTF
 - 1" NPTF
 - 3/4" BSP
 - 1" BSP
 - 1 1/16" - 12 UN (SAE - 12)
 - 1 5/16" - 12 UN (SAE - 16)
- Pressure: 400 PSI Max. Operating
- Warning: 100 PSI ΔP max. without by-pass valve.**
- Temperature: Up to +250° F. Operating
Up to +200° F. w/indicator
- Application: Petroleum based fluids only.
Consult factory for synthetic fluids.

SPIN-ON FILTERS



Average Pressure Drop Through Clean Filter Assembly With 150 SUS Oil At 105° F.



HOW TO ORDER: HF - XX - XX - X - XX

Code	Inlet & Outlet Ports
07	3/4" NPTF
07C	3/4" BSP (G 3/4"-14)
10	1" NPTF
10C	1" BSP (G 1"-11)
11	1 1/16"-12 UN(SAE-12)
13	1 5/16"-12 UN(SAE-16)

Code	By-Pass Valve Setting
00	No By-Pass
25	25 PSI
50	50 PSI

Code	Δ P Indicator Setting
00	No Indicator
22	22 PSID
44	44 PSID

Code	Indicator Option
0	No Indicator
V	Visual Indicator (See DP04 Series)
D	DC Electrical Single Wire (See DP06 Series)
H	Vis/Elec. w/ DIN Conn. (See DP05 Series)

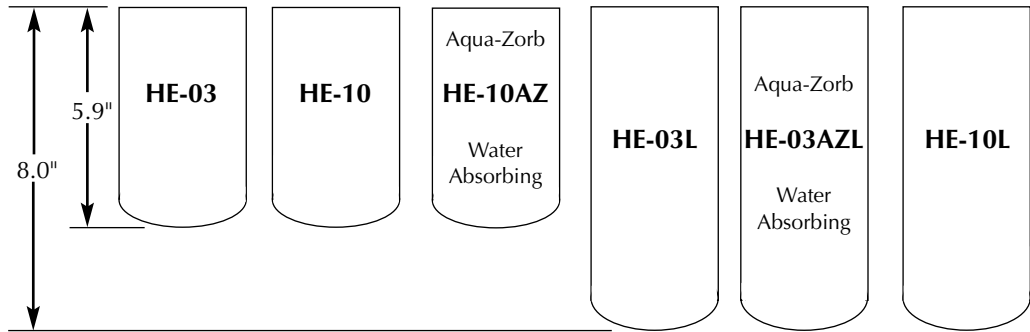
HE, ZHE, & XZHE Element Data: See Pages C36-C37





HE SERIES MEDIUM PRESSURE SPIN-ON FILTER ELEMENTS

For Use With HF Series Filter Heads.



Part Number	HE-03	HE-10	HE-10AZ	HE-03L	HE-03AZL	HE-10L
Diameter	3.7"	3.7"	3.7"	3.7"	3.7"	3.7"
Mounting Thread	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16"	1 1/2" - 16	1 1/2" - 16	1 1/2" - 16
Micron Rating (Nominal)	3 Micron	10 Micron	10 Micron	3 Micron	3 Micron	10 Micron
Beta 2/20/75 (See Below)	3/10/22	9/22/24	8/25/30	3/10/22	5/21/23	9/22/24
Filter Media Area	400 Sq. In.	450 Sq. In.	144 Sq. In.	650 Sq. In.	238 Sq. In.	731 Sq. In.
Water Holding Capacity	-----	-----	3.4 oz.	-----	5.5 oz.	-----
Can Color / Imprint	White/Green	White/Red	White/Orange	White/Green	White/Orange	White/Red

Application Data:

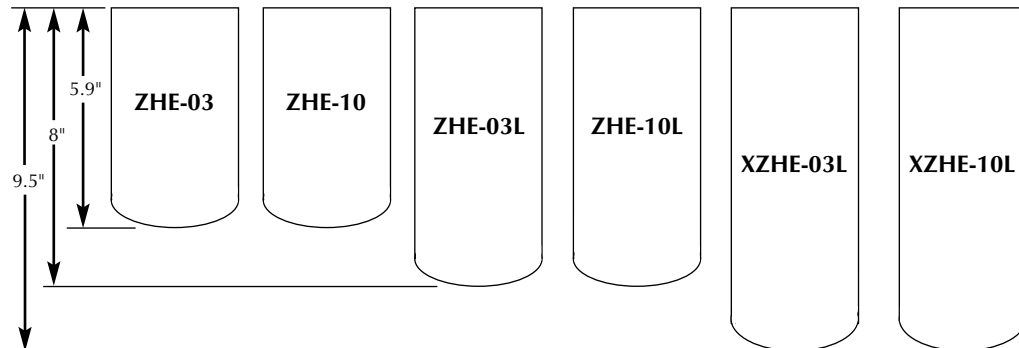
- References:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- Maximum **Operating** Pressure: 400 PSI - All Models.
Warning: 100 PSI ΔP max. without by-pass valve in filter head.
- Operating Temperature: -65 to +250° F.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- Suitable for petroleum based fluids only. Consult factory for synthetic fluids.
- Caution:** Do **not** use HE Series filter elements on internal combustion engines.

Cross References:

Brand	Part Number	Zinga Part Number
Fleetguard	HF-6600	HE-03
	HF-6601	HE-03L
	HF-6610	HE-10
	HF-6611	HE-10L
Pall	HC 7400S UJ4H	HE-10
	HC 7400S UK4H	HE-03
	HC 9540S UJ4H	HE-10
	HC 9540S UK4H	HE-03

ZHE SERIES SYNTHETIC MEDIA SPIN-ON FILTER ELEMENTS

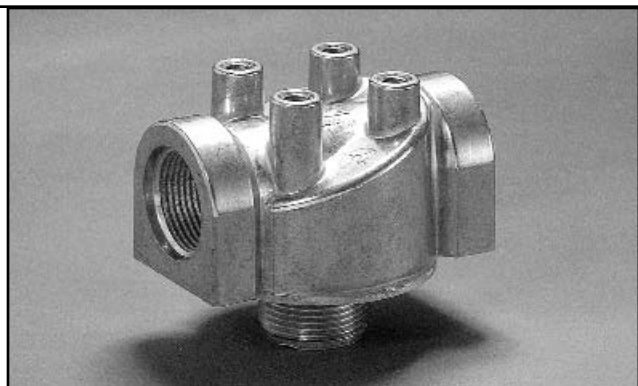
For Use With HF Series Filter Heads



Part Number	ZHE-03	ZHE-10	ZHE-03L	ZHE-10L	XZHE-03L	XZHE-10L
Diameter	3.8"	3.8"	3.8"	3.8"	3.8"	3.8"
Mounting Thread	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16	1 1/2"-16
Micron Rating	3	10	3	10	3	10
Beta 2/20/75 (See Below)	2/3/4	2/6/10	2/3/4	2/6/10	2/3/4	2/6/10
Max. Operating Pressure	400 PSI	400 PSI	400 PSI	400 PSI	800 PSI	800 PSI
Warning: 150 PSI ΔP max. without by-pass valve in filter head.						
Can Color / Imprint	White/Green	White/Red	White/Green	White/Red	White/Green	White/Red

Application Data:

- Reference:
 - Beta_x Rating of 2 = 50% Efficiency (Nominal Rating)
 - Beta_x Rating of 20 = 95% Efficiency
 - Beta_x Rating of 75 = 98.7% Efficiency (Absolute Rating)
- "Z-Glass" Media
- Operating Temperature: -65 to +250° F.
- Application: Petroleum based fluids only. Consult factory for synthetic fluids.
- Buna "N" Gasket standard. Fluorocarbon Gasket optional, consult factory.
- **Caution:** Do **not** use ZHE Series filter elements on internal combustion engines.



DHF SERIES SPIN-ON FILTER HEADS

Flows Up To:
35 GPM

Port Sizes:

- 3/4" NPTF & 1" NPTF
- 1 1/16" – 12UN (SAE-12)
- 1 5/16" – 12UN (SAE-16)

Pressure:

- 500 PSI Maximum Operating.
- 1000 PSI Static Burst

- Warning: When applying a filter head without a by-pass valve, the maximum ΔP of the assembly is limited to 500 PSI or the maximum ΔP of the element in use. (Whichever rating is lower.)

Indicators:

Visual, Single Wire DC, & Vis/Ele w/ DIN

Temperature:

- With Indicator: 200° F
- Without indicator:
 - Cellulose Elements: Up to 225° F
 - Synthetic Elements: Up to 250° F

Replacement Filters:

- ME & ZME cellulose and synthetic spin-on elements in 6" and 9 1/2" length.

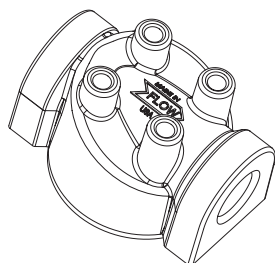
Assembly Fatigue & Strength

- 100,000 cycles @ 0-500 PSI
- 300,000 cycles @ 0-400 PSI
- 1,000,000 cycles @ 0-350 PSI

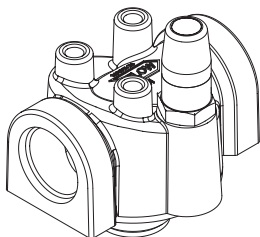
Applications:

Petroleum Based Fluids Only.
Consult Factory For Synthetic Fluids.

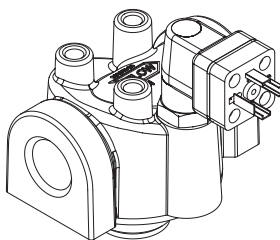
SPIN-ON FILTERS



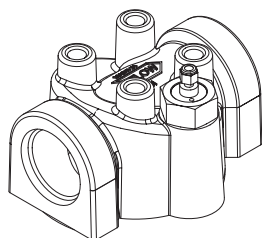
DHF Series Filter Head Shown Without Indicator



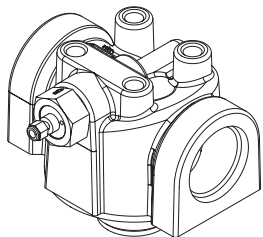
Shown with Zinga DP04 Series Visual Indicator



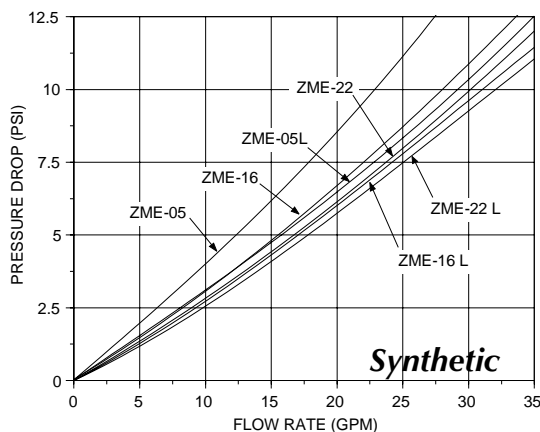
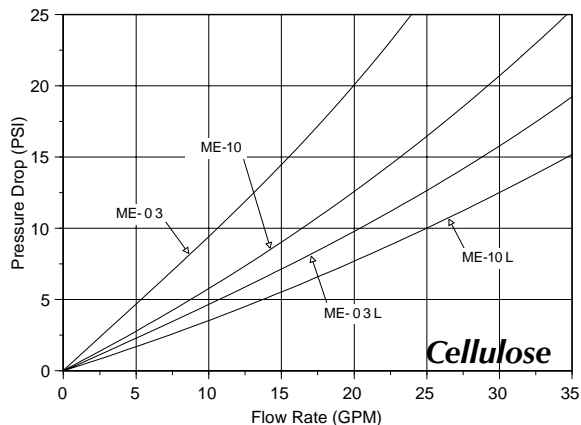
Shown with Zinga DP05 Series Visual/Electrical Indicator



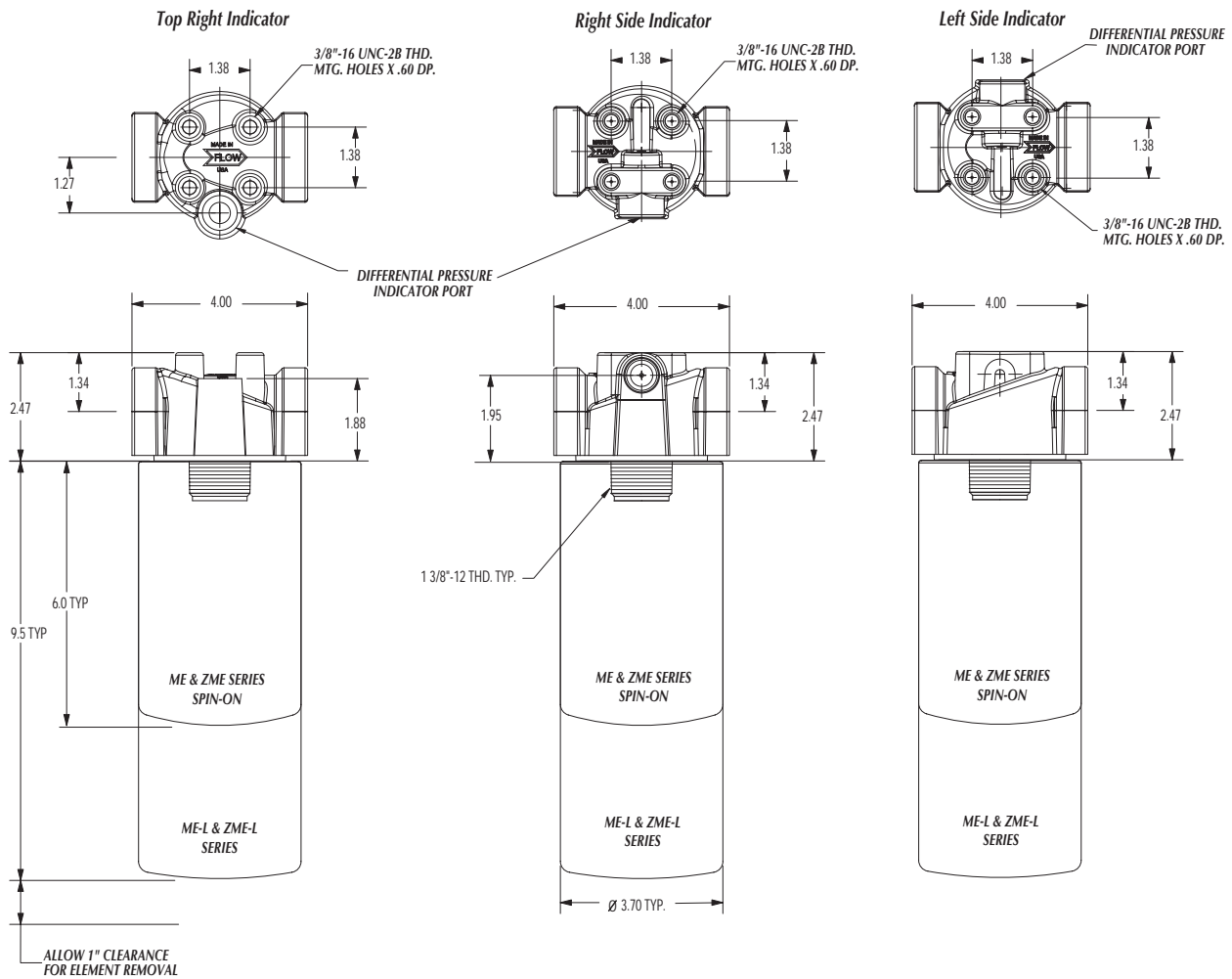
Shown with Zinga DP06 Series DC Electrical Indicator



Shown with Side Indicator Port and DP06 Series Single Wire DC Indicator



Average Pressure Drop Through Clean Filter Assembly
With 150 SUS Oil At 105° F



SPIN-ON FILTERS

HOW TO ORDER: DHF - XXX - XX - X - XX-XX

Code	Inlet & Outlet Ports
N12	3/4" NPTF
N16	1" NPTF
S12	1 1/16"-12 UN(SAE-12)
S16	1 5/16"-12 UN(SAE-16)

Code	By-Pass Valve Setting
00	No By-Pass
25	25 PSI
50	50 PSI

Code	Δ P Indicator Location
00	No Indicator
LS	Left Side
RS	Right Side
RT	Right Top

Code	Δ P Indicator Setting
00	No Indicator
22	22 PSID
44	44 PSID

Code	Indicator Option	Indicator Series
0	No Indicator	None
V	Visual Indicator	DP04 series
D	DC Electrical Single Wire	DP06 series
H	Vis/Elec. w/ DIN Connector	DP05 series

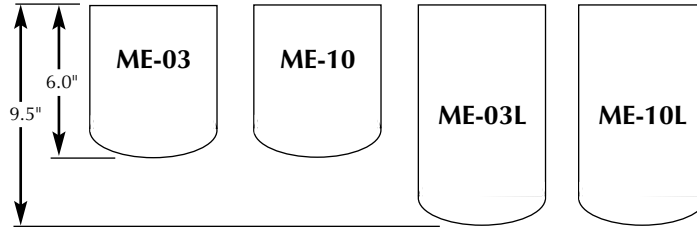
ME & ZME Element Data : See Page C40

ME & ZME SERIES SPIN-ON FILTER ELEMENTS

For Use With DHF Series Filter Heads

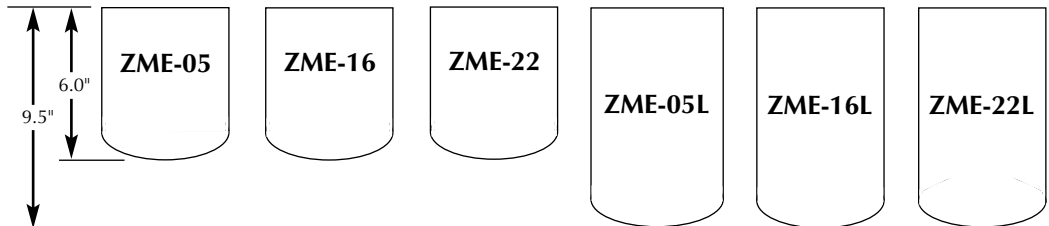
SPIN-ON FILTERS

Cellulose Media Elements



Part Number	ME-03	ME-10	ME-03L	ME-10L
Diameter	3.7"	3.7"	3.7"	3.7"
Mounting Threads	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12
Micron Rating	3	10	3	10
Beta 2/20/75	4/12/16	10/21/25	4/12/16	10/21/25
Max. Operating Pressure	500 PSI	500 PSI	500 PSI	500 PSI
Max Element Δ Pressure	Warning: 100 PSI Δ P Maximum without by-pass valve in filter head.			
Can Color / Imprint	White/Green	White/Red	White/Green	White/Red

Synthetic Media Elements



Part Number	ZME-05	ZME-16	ZME-22	ZME-05L	ZME-16L	ZME-22L
Diameter	3.7"	3.7"	3.7"	3.7"	3.7"	3.7"
Mounting Threads	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12	1 3/8" - 12
Micron Rating	5	16	22	5	16	22
Beta 2/20/75	2/3/5	5/10/16	7/17/22	2/3/5	5/10/16	7/17/22
Max. Operating Pressure	500 PSI	500 PSI	500 PSI	500 PSI	500 PSI	500 PSI
Max. Element Δ Pressure	Warning: 200 PSI Δ P Maximum without by-pass valve in filter head.					
Can Color / Imprint	White/Green	White/Red	White/Black	White/Green	White/Red	White/Black