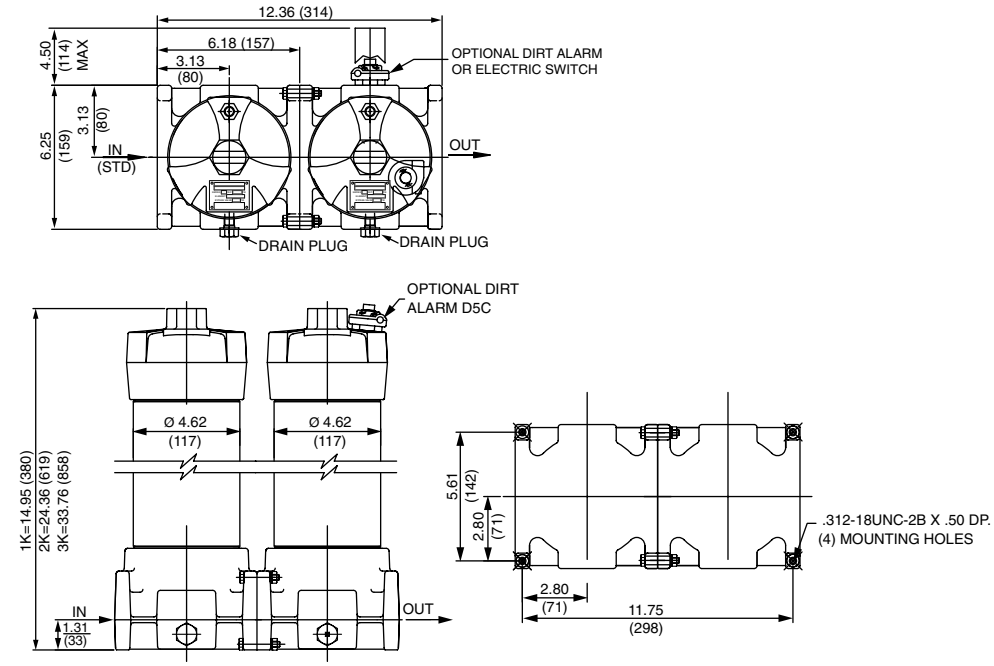
2K9 Single Pass Filter Kit

NEW PRODUCT

100 gpm
380 L/min
900 psi
60 bar

Custom 2K9, contact factory for details.



Metric dimensions in ( ).

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	900 psi (60 bar)
Min. Yield Pressure:	3200 psi (220 bar)
Rated Fatigue Pressure:	Contact factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) each filter housing
Porting Base & Cap:	Cast Aluminum
Element Case:	Steel
Element Change Clearance:	8.50" (215 mm) for 1K; 17.5" (445 mm) for KK; 26.5" (673 mm) for 27K

Element Performance Information

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402 $\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171 $\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$	Dirt Holding Capacity gm
KZ1	<1.0	<1.0	<1.0	<4.0	4.2	112
KZ3	<1.0	<1.0	<2.0	4.7	5.8	115
KZ5	2.5	3.0	4.0	6.5	7.5	86
KZ10	7.4	8.2	10.0	10.0	12.7	108
KZ25	18.0	20.0	22.5	19.0	24.0	93

Element Collapse Rating:	150 psid (10 bar)
Flow Direction:	Outside In
Element Nominal Dimensions:	3.9" (99 mm) O.D. x 9.0" (230 mm) long

Fluid Compatibility

Type Fluid	Appropriate Schroeder Media
Petroleum Based Fluids	Synthetic (Z) Media
High Water Content	Z1, Z3, Z5, Z10, Z25
Invert Emulsions	Z10, Z25
Water Glycols	Z3, Z5, Z10, Z25
Phosphate Esters	All Z Media with EPR Seals
Skydrol	Z3H.5, Z5H.5, Z10H.5, Z25H.5 and WH.5

Note: Contact factory regarding use of E Media in High Water Content, Invert Emulsion and Water Glycol Applications.

For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.

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Features

■ Two patent-pending K9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration ■ Accepts HF4 spec Elements ■ 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems

Element Selection
Based on Flow Rate

Pressure	Element Series	Element Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 40 psi (2.8 bar) bypass valve.
To 900 psi (60 bar)	Z Media	KZ1	1KZ1 / 2KZ1†
		KZ3	1KZ3
		KZ5	1KZ5
		KZ10	1KZ10
		KZ25	1KZ25
	Flow	gpm	0 20 40 60 80 100
		(L/min)	0 50 150 250 380

†Double and triple stacking of K-size elements can be replaced by single KK & 27K elements, respectively.

Pressure Drop Information
Based on Flow Rate and Viscosity

$\Delta P_{filter} = \Delta P_{housing} + \Delta P_{elements}$

Exercise:
Determine ΔP at 80 gpm (303 L/min) for 2K9209DBBP24P24 using 150 SUS (32 cSt) fluid.

Solution:

$\Delta P_{housing}$ = 12.0 psi [0.8 bar]

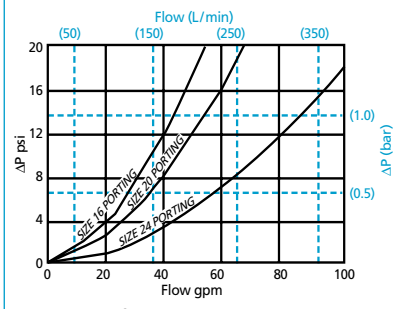
$\Delta P_{element1}$ = 80 x .03 = 2.4 psi [0.2 bar]

$\Delta P_{element2}$ = 80 x .05 = 4.0 psi [0.3 bar]

ΔP_{total} = 12.0 + 2.4 + 4.0 = 18.4 psi [1.3 bar]

$\Delta P_{housing}$

2K9 $\Delta P_{housing}$ for fluids with sp gr = 0.86:



sp gr = specific gravity

$\Delta P_{element}$

$\Delta P_{element}$ = flow x element ΔP factor x viscosity factor

El. ΔP factors @ 150 SUS (32 cSt):

	1K	2K	3K
KZ1	.20	.10	.05
KZ3	.10	.05	.03
KZ5	.08	.04	.02
KZ10	.05	.03	.02
KZ25	.04	.02	.01

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor:
Divide viscosity by 150 SUS (32 cSt).

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

Filter Model Number Selection

Filter Series	No. of Elements	Length of Element	First Element	Second Element	Seal Material	"In" Porting	"Out" Porting	Dirt Alarm® (See Appendix A for selection information)
2K9	1	09 18 27	A = Z1 B = Z3 C = Z5 D = Z10 E = Z25	A = Z1 B = Z3 C = Z5 D = Z10 E = Z25	B = Buna N H = EPR V = Viton	P16 P20 P24 B16 B20 B24 F16 F20 F24 S16 S20 S24	P16 P20 P24 B16 B20 B24 F16 F20 F24 S16 S20 S24	(supplied in each housing) D5 D5C Electrical Indicators: See Appendix A for complete list of options
	2	09						
	3	09						

U = Testpoint installation in each cap

UU = Testpoint installation in block (upstream and downstream)

Other Available Options

See Appendix B for additional information on these options and instructions on how to order.