



SCHROEDER INDUSTRIES...THE FILTER COMPANY

SCHROEDER INDUSTRIES 125





	Filter	Flow gpm (L/min)	Pressure psi (bar)	Element Length and/or Size	Page
Suction Filters	ST	20 (75)	_	K, KT	127
	In-Line Mag	netic Suction Sep	arators	SKB	131
	Tank-Mount	ed Magnetic Suc	tion Separators	SKB	132
Tank-Mounted	MTA	15 (55)	100 (7)	ЗТА	135
Filters	МТВ	35 (135)	100 (7)	3TB, 5TB	139
	ZT	40 (150)	100 (7)	8Z	143
	КТ	80 (300)	50 (3.5)	КВ	147
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	RTI	120 (455)	100 (7)	КІ, ККІ, 27КІ	155
	KFT	100 (380)	100 (7)	К, КК, 27К	159
	LRT	150 (570)	100 (7)	18L	163
	BFT	300 (1135)	100 (7)	BB	167
	QT	450 (1700)	100 (7)	16Q, 16QCLQF, 16QPML, 39Q, 39QCLQF, 39QPML	171
	КТК	100 (380)	100 (7)	К, КК, 27К	175
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Spin-On Filters	PAF1	20 (75)	100 (7)	6P	185
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Return Line and	TF1	30 (120)	300 (20)	А	197
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Filters	LF1-2"	120 (455)	300 (20)	18LC	205
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	SRLT	25 (100)	1400 (100)	6R	213
	RLT	70 (265)	800 (55)	9V, 14V	217
	KF8	100 (380)	800 (55)	К	221
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Base-Ported	0515	450 (1700)	1500 (100)		777
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T III CETS		500 (1900)	1500 (100)		241
		250 (1900)	FOO (25)		240
	Qrus	33U (1325)	JUU (JJ)	זסע, זסעכנעד, זטעצועוב, אשע, אשעכנעד, אשעצועוב	249

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Tank-Mounted Suction Filter ST

	<image/> <section-header><section-header><section-header><section-header><section-header><list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item></section-header></section-header></section-header></section-header></section-header>	20 gpm 75 L/min	ST SkB Housings MTA MTB ZT KT RT RT RT RT RT RT RT RT RT RT RT KF3 LF1—2" MLF1 SRLT RLT
Flow Rating	Lin to 20 anm (75 L/min) for 150 SLIS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	Suction Filter	Housing	K9
Min. Yield Pressure:	Not Applicable	Specifications	2K9
Rated Fatigue Pressure:	Not Applicable		3K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		OF15
Bypass Setting:	Non-bypassing		QUIS
Porting Head: Cap: Element Case:	Die Cast Aluminum Steel Steel		QLF15
Weight of ST-1K: Weight of ST-2K:	11.1 lbs. (5.0 kg) 14.7 lbs. (6.7 kg)		QFD5
Element Change Clearance:	7.25" (185 mm) for 1K; 17.50" (445 mm) for KK		

ST Tank-Mounted Suction Filter



Metric dimensions in ().

Element Performance	Element	Filtration Ratio Using automated part $\beta_x \ge 75$	D Per ISO 4572/NF icle counter (APC) calib $\beta_v \ge 100$	PA T3.10.8.8 rated per ISO 4402 $\beta_x \ge 200$	Filtration Ratio Using APC calibrat B _v (c) ≥ 200	wrt ISO 16889 ed per ISO 11171 $\beta_{v}(c) \ge 1000$
Information	К10	15.5	16.2	18.0	N/A	N/A
	KTZ10	7.4	8.0	10.0	8.0	10.0
Dirt Holding	Element	DHC (gm)				
Capacity	K10	44				
	KTZ10	56				
	Elemen	nt Collapse Rating: Flow Direction: minal Dimensions:	150 psid (10 bar) Inside Out 3.9" (99 mm) O.I	D. x 9.0" (230 mm) long	

Tank-Mounted Suction Filter ST

	Тур	e Fluid	Appropriate Schro	eder Media						Fluid	ST
Petrol	eum Baseo	d Fluids	All E (cellulose) and Z (synthetic) media						Compatibility	C1//D	
Hig	h Water C	Content	10 μ Z (synthetic) media							SKB Housings	
	Invert Em	ulsions	10 µ Z (synthetic) me	edia							ΝΤΛ
	Water	Glycols	$10 \ \mu$ Z (synthetic) me) μ Z (synthetic) media							IVITA
	rnosphau	e esters	with H (EPR) seal des	signation	EFR) Sedi	Jesignatio	n anu		ulose)		МТВ
	S	kydrol®	10 µ Z (synthetic) me	edia with H.5	seal desig	nation (EF	PR seals	and .		Skydrol is a registered	ZT
			stainless steel wire m	iesh in eleme	nt, and lig	iht oil coa	ting on	n housing e	exterior)	trådemark of Šolutia Inc.	КТ
											RT
	Eler	nent	Element selection	ns are predie	cated on	the use o	f 150 s	SUS (32 cs	it)	Element	N1
Pressure	Series	Part No.	petroleum based	fluid.		2	V 10†			Selection	RTI
Hydrostatic Suction	E Media	K25		, 1K25		21		2K25†		Based on Flow Rate	KFT
Service	Z Media	KTZ10		1KTZ10			2	KTZ10†			LRT
	Flow	gpm	0 5		10		15		20		RFT
	11000	(L/min)	Ó	25		50			75		
Note: Con	tact facto	ry regardin	g use of E Media in l	High Water	Content,	nvert Em	ulsion	and Wate	r Glycol		QI
Applicatio	ons. For m	ore inform	ation, refer to Fluid	Compatibilit	y: Fire Re	sistant Flu	uids, pa	ages 19 ar	nd 20.		КТК
											LTK
AD -	۸D .	۸D								Duccess	Accessories
$\Delta \mathbf{r}_{\text{filter}} = 2$	△Phousing +	· DF element								Pressure	for Tank- Mounted
Note: Plott	ted curves sl	hown in graj	oh below include both	housing and e	lements as	indicated	for fluid	ds with sp g	r = 0.86.	Information	Filters
		25	Flow (L/m (25) (5	in) i0) (75)					Based on	PAF1
		2.5			(0 15)					Flow Rate and Viscosity	MAF1
		2.0									
		. <u></u> 1.5			(0.10)						IVIE2
		ব 1.0	51-51-24-10-1								TF1
		0.5		1K25-P-C	(0.05)						KF3
		0		ST-2K25-P-0							LF1—2"
sp gr = spe	cific gravity	0	5 10 Flow gpr	15 n	20						MIEA
Sizing of el	lements sha	uld be base	d on element flow info	ormation prov	vided in th	- Flement	Selectio	on chart ah	ove		
Sizing of e	iements she		d on element now into			e Liement	Jelectic		ove.		SRLT
Notes											RLT
Notes											KF8
											KQ
											KJ
											2K9
											3K9
											QF15
											OI F15
											QUID
											SSQLF15
											QFD5

ST Tank-Mounted Suction Filter



NOTES:

- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4.
- Box 4. For options H and W, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.
- Box 6. See also "Accessories for Tank-Mounted Filters," page 183.

In-Line Magnetic Suction Separators

In addition to offering our magnetic suction strainer (SKB) as a stand alone product, we also offer the SKB enclosed in a housing, so that it can be used either in-line (TF-SKB or KF3-SKB) or as a reservoir-mounted filter (BFT-SKB). Flow rates and available porting vary—refer to the specifications for each.

Features and Benefits

 Protects components downstream by capturing potentially harmful ferrous particles

Specifications

Flow Rating:	12.5 gpm (47 L/min)
Element Replacement Part Number:	SKB-1
Element Change Clearance:	2.5" (65 mm)
Weight of TF-SKB:	5.8 lbs (2.6 kg)



лтр

SKB Housings

TF-SKB

KF3-SKB

Applications

KT RT RTI

KFI

LIVI

BFT

от

КТК

Features and Benefits

 Protects components downstream by capturing potentially harmful ferrous particles

Specifications

Flow Rating:	35 gpm (130 L/min)
Element Replacement Part Number:	A-LF-1789
Element Change Clearance:	1.5" (40 mm)
Weight of KF3-SKB:	11.5 lbs (5.2 kg)



essories or Tanklounted Filters

PAF1

MED

TF1

KF3

LF1—2"

MLF1

SRIT

- KF8
- K9
- R.J
- 2K9

(9

- эгд
-)F15

QLF15

- SSQLF15
 - OFDE

INDUSTRIAL

MOBILE VEHICLES

In-Line Magnetic Suction Separators

Filter	How to Build	a Valid Model Nun	ber for a Schroed	ler TF-SKB:			
Model	BOX 1	BOX 2 BOX 3	BOX 4				
Number							
Selection	BOX 1 BOX 2 BOX 3 BOX 4						
	TF-SKB -	- P -	Y = TF-SKBF	Ϋ́Υ			
	BOX 1	BOX 2	BOX 3		BOX 4		
	Filter Series	Seal Material	Porting		Dirt Alarm [®] Options		
	TF-SKB	Omit = Buna N	P = 1" NPTF		Omit = None		
				Visual	Y = Vacuum gauge		
				Electrical	VS = Electric vacuum switch VS1 = Heavy-duty vacuum switch		
	How to Puild	a Valid Madal Num	har far a Schroos		5.		
	BOX 1	BOX 2 BOX 3	BOX 4		D.		
	KF3-SKB -	_	-				
	Example: NOT	E: One option per box	DOV 4				
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$						
	BOX 1	BOX 2	BOX 3		BOX 4		
	Filter Series	Seal Material	Porting		Dirt Alarm [®] Options		
	KF3-SKB	Omit = Buna N	P = 1½" NPTF		Omit = None		
				Visual	Y = Vacuum gauge		
				Electrical	VS = Electric vacuum switch VS1 = Heavy-duty vacuum switch		
				L	1		
	Notes						
NOTE:							
sox 1. See specifications on previous page for							
part numbers.							

Tank-Mounted Magnetic Suction Separators



Tank-Mounted Magnetic Suction Separators



NOTE:

MiniMiser[™] Tank-Mounted Filter MTA



Element Change Clearance: 3.0" (76 mm)

MTA MiniMiser[™] Tank-Mounted Filter



Metric dimensions in ().

Element Performance	Element	Filtration Ra Using automated p $\beta_x \ge 75$	tio Per ISO 4572/N particle counter (APC) cal $\beta_x \ge 100$	Filtration Ratic Using APC calibra $\beta_x(c) \ge 200$	e wrt ISO 16889 ted per ISO 11171 β _x (c) ≥ 1000	
mormation	3TA10	15.5	16.2	18.0	N/A	N/A
	3TAZ3	<1.0	<1.0	<2.0	<4.0	4.8
	3TAZ5	2.5	3.0	4.0	4.8	6.3
	3TAZ10	7.4	8.2	10.0	8.0	10.0
	3TAZ25	18.0	20.0	22.5	19.0	24.0
_						

Dirt Holding Capacity

ment	DHC (gm)
10	N/A

Element

3TA10	N/A	
3TAZ3	4	
3TAZ5	6	
3TAZ10	4	
3TAZ25	4	

Element Collapse Rating: 150 psid (10 bar) Flow Direction: Outside In Element Nominal Dimensions: 2.0" (51 mm) O.D. x 3.0" (76 mm) long

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MiniMiser[™] Tank-Mounted Filter MTA





Notes		

$\Delta \mathbf{P}_{housing} + \Delta \mathbf{P}_{element}$
e ∆P at 7 gpm (27 L/min) for 10P8 using 150 SUS (32 cSt) fluid.
= 2.0 psi [.14 bar]
= 7 x 1.48 = 10.3 psi or = [27 x (1.48÷54.9) = .73 bar]
= 2.0 + 10.3 = 12.3 psi or = [.14 + .73 = .87 bar]

е	for Tank- Mounted Filters
ation	PAF1
e	MAF1
osity	MF2
	TF1
	KF3
	LF1—2"
	MLF1
	SRLT
	RLT
	KF8
	K9
	2K9
	3K9
	QF15
	QLF15
	6601545

MTA MiniMiser[™] Tank-Mounted Filter



BOX 5	BOX 6		
Porting Options	Dirt Alarm [®] Options		
P8 = ½" NPTF		Omit = None	
S8 = SAE-8 B8 = ISO 228 G-½"	Visual	Y2C = Bottom-mounted gauge in cap Y5 = Back-mounted gauge in cap	
	Electrical	ESC = Electric pressure switch (2 terminals)	

NOTE: Box 2. Replacement element part numbers are a combination of Boxes 2 and 3. *Example*: 3TA10

MiniMiser[™] Tank-Mounted Filter **MTB**



3.0" (76 mm) MTB-3 5.0" (127 mm) MTB-5

Element Change Clearance:

MTB MiniMiser[™] Tank-Mounted Filter





Metric dimensions in ().

Element Performance	Element	Filtration Ra Using automated p $\beta_x \ge 75$	tio Per ISO 4572/N article counter (APC) cal $\beta_x \ge 100$	$\begin{array}{l} \mbox{Filtration Ratio wrt ISO 16889} \\ \mbox{Using APC calibrated per ISO 11171} \\ \mbox{$\beta_x(c) \geq 200$} \\ \mbox{$\beta_x(c) \geq 1000$} \end{array}$		
Information	3TB10	15.5	16.2	18.0	N/A	N/A
	3TBZ3	<1.0	<1.0	<2.0	<4.0	4.8
	3TBZ5	2.5	3.0	4.0	4.8	6.3
	3TBZ10	7.4	8.2	10.0	8.0	10.0
	3TBZ25	18.0	20.0	22.5	19.0	24.0
	5TB10	15.5	16.2	18.0	N/A	N/A
	5TBZ3	<1.0	<1.0	<2.0	4.7	5.8
	5TBZ5	2.5	3.0	4.0	5.6	7.2
	5TBZ10	7.4	8.2	10.0	8.0	9.8
	5TBZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	
Capacity	3TB10	N/A	
	3TBZ3	11	
	3TBZ5	12	
	3TBZ10	11	
	3TBZ25	11	
	5TB10	N/A	
	5TBZ3	18	
	5TBZ5	21	
	5TBZ10	17	
	5TBZ25	18	
	Element Element Nom	Collapse Rating: Flow Direction: inal Dimensions:	150 psid (10 bar) Outside In 3TB: 3.0" (76 mm) O.D. x 3.0" (76 mm) long 5TB: 3.0" (76 mm) O.D. x 5.0" (127 mm) long

MiniMiser[™] Tank-Mounted Filter **MTB**

		Type Flui	d Appropria	te Schroed	er Media					Fluid	ST
Petro	leum B	ased Fluid	ds All E (cellulo	ose) and Z (s	synthetic) r	media				Compatibility	SKB Housings
											MTA
											МТВ
											77
	Eler	nent	Element selecti	ons are pre	dicated o	on the use of	f 150 SU	S (32 cSt) pet	roleum	Element	
Pressure	Series	Part No.	based fluid and	l a 25 psi ('	1.7 bar) b	ypass valve.				Selection	KI
	F	10	See MTA	3	ГВ		5TB			Based on	RT
Return		25	See	MTA		3TB		5TB		Flow Rate	
Line		Z3	See MTA	3	TBZ3	_	5TBZ	3			RTI
Tank- Mounted	Z	Z5	See MTA	1	3TBZ	5		5TBZ5			KET
Mounteu		210	See MIA	ΓΛ	31821			518210	F		KI I
		225		10	15	20			2		LRT
	Flow	gpm ((L/min) ((25)	10	(50)	(75)	25	(100)	(135)		BFT
			(23)	1.1.1.1		(, 5)		(100)	(100)		211
Shown ab	ove are	the eleme	nts most commonly	used in this	nousing.				n Church		QT
Applicati	ntact ta ons. Fo	r more in	arding use of E M formation. refer t	edia in Hig o Fluid Cor	n vvater (npatibilit	ontent, inve. v: Fire Resista	ant Fluid	ion and vvate ls. pages 19 ai	nd 20.		VTV
111					,						KIK
											LTK
$\Delta \mathbf{P}_{housing}$				1	$\Delta \mathbf{P}_{element}$	t				Pressure	Accessories for Tank- Mounted
					٨D	- flow x olom	ont AP f	octor x viscosity	factor	Drop	Filters
MTB Δ P ho	ousing to	r fluids wi [.] Flow	th sp gr = 0.86 : (L/min)		$\frac{\Delta r_{element}}{FL}$ $\Delta P fa$	ctors @ 150 S	US(32c)	$(0) \times (0) \times (0)$		Information	PAF1
¹²	(25)	()	(125)		2.1. 2. 70	3"	00 (02 0	5"		Based on	
10				.75)	TB10	.73		.40		Flow Rate	IVIAF I
10					TB25	.10		.08		and Viscosity	MF2
8		+ $+$			TBZ1	1.17		.70			
.is				(pai (c.	TBZ5	.00		.25			TF1
. ⊳F			Lousing	AF	TBZ10	.49		.25			
4			1 185 (0	.25)	TBZ25	.33		.16			KF3
2		NTB-3 HOUST			If workin	g in units of ba	ars & L/m	n, divide above	factor		LF1—2"
ا 0		10 15	20 25 30 35		Viscosity	factor: Divide	viscosity by	/ 150 SUS (32 cSt)			MI F1
	a alfia an	Flow g	jpm		,						
sp gr = spe	ecilic gr	avity		1							CDIT

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



$\Delta \mathbf{P}_{filter} = \Delta \mathbf{P}_{housing} + \Delta \mathbf{P}_{element}$							
Exercise:							
D - +	1D -+ 2E		/OF 1	1			

Determine ΔP at 25 gpm (95 L/min) for MTB5TB25S16Y2C using 200 SUS (44 cSt) fluid. Solution: $\Delta P_{housing} = 3.0 \text{ psi } [.21 \text{ bar}]$ $\Delta P_{element} = 25 \times .08 \times (200 \div 150) = 2.6 \text{ psi}$ or $= [95 \times (.08 \div 54.9) \times (44 \div 32) = .19 \text{ bar}]$ $\Delta P_{total} = 3.0 + 2.6 = 5.6 \text{ psi}$ or

= [.21 + .19 = .40 bar]

rmation PAF d on Rate MAF /iscosity ME Creation MAF Creation Control C

MTB MiniMiser[™] Tank-Mounted Filter



Porting Options		Dirt Alarm® Options			
P12 = ¾" NPTF			Omit = None		
P16 = 1" NPTF S12 = SAE-12			Y2C = Bottom-mounted gauge in cap		
		Visual	Y5 = Back-mounted gauge in cap		
516 = 5AE-16			FSC Electric processo quitch		
B12 = ISO 228 G-¾" B16 = ISO 228 G-1"		Electrical	ESC = Electric pressure switch (2 terminals)		

NOTE:

Box 2. Replacement element part numbers are a combination of Boxes 2 and 3. *Example*: 3TB10

SAME DAY SHIPMENT MODEL AVAILABLE! Tank-Mounted Filter ZT



Porting Head & Cap: Element Case: Weight of ZT-8Z:

Weight of ZT-8Z:3.7 lbs. (1.7 kg)Element Change Clearance:10.0" (254 mm)

Die Cast Aluminum

Steel

ZT Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!



Metric dimensions in ().

Element		Filtration Ratio Per ISO 4572/NFPA T3.10.8.8			Filtration Ratio wrt ISO 16889		
Performance	Element	$B_x \ge 75$	$B_x \ge 100$	$B_x \ge 200$	$\beta_x(c) \ge 200$	$B_x(c) \ge 1000$	
information	8Z3	6.8	7.5	10.0	N/A	N/A	
	8Z10	15.5	16.2	18.0	N/A	N/A	
	8ZZ1	<1.0	<1.0	<1.0	<4.0	4.2	
	8ZZ3	<1.0	<1.0	<2.0	<4.0	4.8	
	8ZZ5	2.5	3.0	4.0	4.8	6.3	
	8ZZ10	7.4	8.2	10.0	8.0	10.0	
	8ZZ25	18.0	20.0	22.5	19.0	24.0	
Dirt Holding	Element	DHC (gm)					
Capacity	8Z3	39					
	8Z10	32					
	8ZZ1	51					
	8ZZ3	52					
	8ZZ5	59					
	8ZZ10	55					
	8ZZ25	77					
	Element	t Collapse Rating: Flow Direction: ninal Dimensions:	150 psid (10 bar Outside In 3.2" (81 mm) O	[.]) .D. x 9.25" (235 m	m) long		

SAME DAY SHIPMENT MODEL AVAILABLE! Tank-Mounted Filter ZT



Type Fluid	Appropriate Schroeder Media	Fluid	ST
Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	SKR
High Water Content	All Z (synthetic) media		Housings
Invert Emulsions	10 and 25 μ Z (synthetic) media		МТА
Water Glycols	3, 5, 10 and 25 μ Z (synthetic) media		
Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation		MTB
Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)	Skydrol is a registered trademark of Solutia Inc.	ZT

Pressure	Ele Series	ment Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 25 psi (1.7 bar) bypass valve.				Element
		8Z3 paper	8	Z3 (cellulose med	dia)		Based on
	E Media	8Z10 paper	82	10 (cellulose me	dia)		Elow Pata
Return	Return 8Z25 paper 8Z25 (c				dia)		Flow Rate
Line		8ZZ3		8ZZ3			
Idiik- Mounted	Z	8ZZ5		8ZZ5			
Media 8ZZ10		8ZZ10					
		8ZZ25		8ZZ25			
	Flow	gpm (10	20	30	40	
FIOW	11000	(L/min) (50	1(00	150	

Shown above are the elements most commonly used in this housing.

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.



Notes			

$\Delta \mathbf{P}_{filter} =$	$\Delta \mathbf{P}_{\text{housing}} + \Delta \mathbf{P}_{\text{element}}$	
Exercise: Determin ZT8ZZ1P	ne ∆P at 20 gpm (76 L/min) for ES using 200 SUS (44 cSt) fluid.	
Solution	:	
$\Delta P_{\text{housing}}$	= 1 psi [.07 bar]	
$\Delta P_{element}$	= 20 x .37 x (200÷150) = 9.8 psi or = [76 x (.37÷54.9) x (44÷32) = 0.7 bar]	
ΔP_{total}	= 1.0 + 9.8 = 10.8 psi or = [.07 + .7 = .77 bar]	

ZT Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!



NOTES:

Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. *Example*: 8Z10H

Box 3. E media elements are only available with Buna N seals.

Box 4. For option H, all aluminum parts are anodized.

Tank-Mounted Filter **KT**



Features and Benefits

- Low pressure tank-mounted filter
- Bypass valve included in the element
- Offered in pipe, SAE straight thread and ISO 228 porting
- Space saver, reduces plumbing
- Visual gauge or electrical switch dirt alarms

Model No. of filter in photograph is KTKBZ01BB20N.





AUTOMOTIVE MACHINE MANUFACTURING TOOL



MINING TECHNOLOGY



STEEL MAKING

Elem

MARINE



VEHICLES



KTK

Applications	Mounte
	PAF
	MAR
	MI
	Т
	KI
	LF1—2
	MLI
	SR
	R
C 'll4	KI
Housing	k
Specifications	21
	36

n the

Flow Rating:	Up to 80 gpm (300 L/min) for 150 SUS (32 cSt) fluids	Fliter	К9
Max. Operating Pressure:	50 psi (3.5 bar)	Housing	
Min. Yield Pressure:	190 psi (13 bar)	Specifications	2K9
Rated Fatigue Pressure:	Contact factory		3K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 42 psi (2.9 bar)	Q	/F15 F15
Porting Base & Cap: Element Case:	Die Cast Aluminum Steel	SSQL	.F15
Weight:	5.6 Lbs. (2.5 kg)	0	EDE
ement Change Clearance:	8.0" (203 mm)	Q	FUJ

KT Tank-Mounted Filter



Element Performance	Element	Filtration Ra Using automated p $\beta_x \ge 75$	tio Per ISO 4572/N article counter (APC) cali $\beta_x \ge 100$	$\label{eq:Filtration Ratio wrt ISO 16889} \\ \mbox{Using APC calibrated per ISO 11171} \\ \mbox{$\beta_x(c) \geq 200$} \qquad \mbox{$\beta_x(c) \geq 1000$} \\ \end{tabular}$		
mormation	KBE03B	6.8	7.5	10.0	N/A	N/A
	KBE10B	15.5	16.2	18.0	N/A	N/A
	KBZ01B	<1.0	<1.0	<1.0	<4.0	4.2
	KBZ03B	<1.0	<1.0	<2.0	4.0	4.8
	KBZ05B	2.5	3.0	4.0	4.8	6.3
	KBZ10B	7.4	8.2	10.0	8.0	10.0
	KBZ25B	18.0	20.0	22.5	19.0	24.0
Dirt Holding	Element	DHC (am)				
Dirt Holding	Liement	Brie (gin)				

Dirt Holdina	Element	DHC (gm)		
Capacity	KBE03B	54		
	KBE10B	44		
	KBZ01B	112		
	KBZ03B	115		
	KBZ05B	119		
	KBZ10B	108		
	KBZ25B	93		
	Elemer Element No	nt Collapse Rating: Flow Direction: minal Dimensions:	150 psid (10 bar) for standard elements Outside In 3.9" (99 mm) O.D. x 9.0" (230 mm) long	

Tank-Mounted Filter **KT**

	Туј	pe Fluid	Appropr	iate Schroeder	Media			Fluid	ST
Petrole	eum Base	d Fluids	All E (cell	ulose) and Z (syn	thetic) media		Compatibility	SKR	
									Housings
									MTA
									МТВ
									ZT
								_	
Pressure	Eleı Series	ment Part No.	Elemen petrole	it selections are um based fluid	e predicated on th and a 25 psi (1.7	e use of 150 SU bar) bypass val	S (32 cSt) ve.	Element	KT
	_	KBE03		KBE03				Selection	RT
	E Media	KBE10			KBE10			Based on	DTI
	media	KBE25			KBE25			FIOW Rate	
To 50 psi		KBZ01		KBZ0	1				KFT
(3.5 bar)	7	KBZ03			KBZ03				
	Z Media	KBZ05			KBZ05				LRT
		KBZ10			KBZ10				RET
		KBZ25			KBZ25				DIT
	Flow	gpm	0	20	40	60	80		QT
	FIOW	(L/min)	0	50	150	250	300		
Shown abo	ve are the	elements m	ost commor	nly used in this ho	ousing.				KIK
Note: Con Applicatio	tact facto ons. For m	ry regardir ore inform	ng use of E ation, refe	Media in High er to Fluid Comp	Water Content, Inv atibility: Fire Resis	vert Emulsion an stant Fluids, page	d Water Glycol es 19 and 20.		LTK



Notes		

$\Delta \mathbf{P}_{filter} = \Delta \mathbf{P}_{housing} + \Delta \mathbf{P}_{element}$	
Exercise: Determine ΔP at 60 gpm (227 L/min) for KTKBZ05BB20N using 200 SUS (44 cSt) fluid.	
Solution:	
$\Delta P_{\text{housing}} = 2.1 \text{ psi } [.14 \text{ bar}]$	
$\Delta P_{\text{element}} = 60 \times .08 \times (200 \div 150) = 6.4 \text{ psi}$ or = [227 x (.08 ÷ 54.9) x (44 ÷ 32) = .45 bar]	
ΔP_{total} = 2.1 + 6.4 = 8.5 psi or = [.14 + .45 = .59 bar]	





BOX 4		BOX 5				
Porting		Dirt Alarm [®] Options				
P20 = 1¼" NPTF		Omit = None				
S20 = SAE-20	Visual	Y2C = Bottom-mounted gauge in cap				
B20 = ISO 228 G-1¼"	Electrical	ESC = Electric switch (2 terminals)				

NOTE: Box 2. KB elements have integral bypass valve. Replacement element part numbers are a combination of Boxes 2 and 3.

SAME DAY SHIPMENT MODEL AVAILABLE!

Tank-Mounted Filter **RT**



Features and Benefits

- Low pressure tank-mounted filter with up to 3 inlet ports
- Meets HF4 automotive standard
- Top, side or bottom mounting
- Optional check valve prevents reservoir siphoning
- RTW model allows filter to be welded to tank, instead of being bolted
- Double and triple stacking of K-size element can be replaced by single KK or 27K-size element
- Also available with new DirtCatcher[®] elements (KDZ and KKDZ)
- Various Dirt Alarm[®] options
- Same day shipment model available
- Allows consolidation of inventoried replacement elements by using K-size elements

Model No. of filter in photograph is RT1K10S24NP16CY2.











STEEL MAKING



VEHICLES

Applications	Accesso for T Mou Fi I M
	14

RT

100 gpm *380 L/min*

100 psi

7 bar

MOBILE

			KF
Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter	K
Max. Operating Pressure:	100 psi (7 bar)	Housing	
Min. Yield Pressure:	400 psi (28 bar)	Specifications	2K
Rated Fatigue Pressure:	90 psi (6 bar), per NFPA T2.6.1-2005		3 K
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		054
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 48 psi (3.3 bar)		QF1: OLF1
Porting Head & Cap: Element Case:	Die Cast Aluminum Steel		SSQLF1!
Weight of RT-1K: Weight of RT-2K:	11.4 lbs. (5.2 kg) 14.5 lbs. (6.6 kg)		QFD!
Element Change Clearance:	8.0" (205 mm) for 1K; 17.50" (445 mm) for KK; 26.5" (673 mm) for 27K		

RT Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!



Optional mounting rings (P/N A-LFT-813 and A-LFT-1448; see page 183 for details) available to weld to tank.

Metric dimensions in ().

Element Performance		Filtration Ra	ntio Per ISO 4572/M particle counter (APC) ca	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171		
Information	Element	β _x ≥ 75	β _x ≥ 100	β _x ≥ 200	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$
information	КЗ	6.8	7.5	10.0	N/A	N/A
	К10	15.5	16.2	18.0	N/A	N/A
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)								
Capacity	K3	54	ККЗ	108	27K3	162	-	_	-	_
	K10	44	KK10	88	27K10	132	-	-	-	-
	KZ1	112	KKZ1	224	27KZ1	336	KDZ1	89	KKDZ1	188
	KZ3	115	KKZ3	230	27KZ3	345	KDZ3	71	KKDZ3	150
	KZ5	119	KKZ5	238	27KZ5	357	KDZ5	100	KKDZ5	210
	KZ10	108	KKZ10	216	27KZ10	324	KDZ10	80	KKDZ10	168
	KZ25	93	KKZ25	186	27KZ25	279	KDZ25	81	KKDZ25	171

Flow Direction: Element Nominal Dimensions:

Element Collapse Rating: 150 psid (10 bar) for standard elements

Outside In See RTI, page 155 for inside out flow version.

K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long 27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE!

Tank-Mounted Filter RT



Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!



for details.

How to Build a Valid Model Number for a Schroeder RT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
RT -	_	-		-			-

Example: NOTE: Only box 8 may contain more than one option

BOX 1 BOX 2 BOX 3 BOX 5 BOX 7 BOX 4 BOX 8 BOX 6 =RT1KZ10S24S24NY2 - 1 - KZ10 S24 S24 N Y2 RT

BOX 1	BOX 2	BOX 3				BOX 4
Filter Series	Number of Elements		Seal Material			
RT	1	K Length	KK Length	27K Length		Omit = Buna N
RTW	2 3	K3 K10 K25	KK3 KK10 KK25	27K3 27K10 27K25	= 3 μ Ε media (cellulose) = 10 μ Ε media (cellulose) = 25 μ Ε media (cellulose)	H = EPR W = Buna N
		KZ1 KZ3 KZ5 KZ10 KZ25 KDZ1 KDZ3 KDZ5 KDZ10 KDZ25	KKZ1 KKZ3 KKZ5 KKZ10 KKZ25 KKDZ1 KKDZ3 KKDZ5 KKDZ10 KKDZ25	27KZ1 27KZ3 27KZ5 27KZ10 27KZ25	 = 1 μ Excellement[®] Z media (synthetic) = 3 μ Excellement Z media (synthetic) = 5 μ Excellement Z media (synthetic) = 10 μ Excellement Z media (synthetic) = 25 μ Excellement Z media (synthetic) = DirtCatcher[®] 1 μ Excellement Z media = DirtCatcher 5 μ Excellement Z media = DirtCatcher 5 μ Excellement Z media = DirtCatcher 10 μ Excellement Z media = DirtCatcher 20 μ Excellement Z media 	H.5 = Skydrol® compatibility
		KM60 KW			= 60 μ M media (reusable metal) = W media (water removal)	

BOX 5 Specification of all 3 ports is required

	Inlet Porting		Outlet Porting Options
Port A	Port B	Port C	Omit = 1½" NPT male
	N = None	N = None	C = Check valve
= 1" NPTF = 1¼" NPTF = 1½" NPTF	P16 = 1" NPTF P20 = 1¼" NPTF P24 = 1½" NPTF	P2 = 1/8" NPTF P16 = 1" NPTF	D = Diffuser CD = Check valve & diffuser
= 2" NPTF = SAE-16 = SAE-20	P32 = 2" NPTF S16 = SAE-16 S20 = SAE-20		T = 13" Tube extension
= SAE-24 = SAE-32	S24 = SAE-24 S32 = SAE-32	Inlet Porting Location	A = Non-threaded outlet
 1¼" SAE 4-bolt flange Code 61 1½" SAE 4-bolt flange Code 61 2" SAE 4-bolt flange Code 61 	F20 = 1¼" SAE 4-bolt flange Code 61 F24 = 1½" SAE 4-bolt flange Code 61 F32 = 2" SAE 4-bolt flange Code 61	A C Top View B	
= ISO 228 G-1½"	B24 = ISO 228 G-1½"		

BOX 7

Dirt Alarm [®] Options							
		Omit = None					
Located	Visual	Y2 = Back-mounted tri-color gauge					
@ Port D	Electrical	ES = Electric switch ES1 = Heavy-duty electric switch with conduit connector					
Located in cap	Visual	Y2C = Bottom-mounted tri-color gauge Y5 = Back-mounted gauge in cap					
Located	Visual	Y2R = Back-mounted gauge mounted on opposite side of standard location					
@ Port C	Electrical	ESR = Electric switch mounted on opposite side of standard location ES1R = Heavy-duty electric switch with conduit connector					

BOX 8 Additional Options

BOX 6

Omit = None

- G2293 = Cork gasket
- G547 = Two 1/8" gauge ports
- G820 = Stamped cap
 - N = No-Element indicator
 - M = Metric thread for SAE 4-bolt flange mounting holes (specify after each port designation)

NOTES:

- Box 1. RTW allows filter to be welded to tank instead of bolted.
- Box 2. Number of elements must equal 1 when using KK or 27K elements
- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. Double and triple stacking of K-size elements can be replaced by single KK and 27K elements, respectively.
- Box 4. For options H, W, and H.5 all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.
- Box 5. If using Port B, Port A & B must always be the same type and size. Example: (A) P20 (B) P20 (C) P16

To qualify for same day shipment, inlet porting must be S24S24N or \$20NN.

P16 P20

P24 P32 S16

S20 S24

S32

F20

F24

F32

B24

Tank-Mounted Filter (Inside Out Flow) RTI

Model No. of filter in photograp	<section-header></section-header>	120 gpm 455 L/min 100 psi 7 bar	ST SKB Housings MTA MTB ZT KT RTI RTI LRT LRT LRT QT KTK
Model No. of filter in photograph	1 IS KTI3KZ IUSZ4NP 1012.		LIK
		Applications	for Tank- Mounted Filters
			PAF1
INDUSTRIAL AUTOMOTIVI	MACHINE MINING		MAF1
			MF2
			TF1
			KES
			154
MAKING MARINE	VEHICLES		
			MLF1
		•	SRLT
			RLT
Flow Rating	: Up to 120 gpm (455 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure	: 100 psi (7 bar)	Specifications	К9
Rated Fatique Pressure	: Contact factory		2K9
Temp. Range	: -20°F to 225°F (-29°C to 107°C)		21/0
Bypass Setting	Cracking: 25 psi (2 bar)		389
Porting Head & Can	Full Flow: 62 psi (4.3 bar)		QF15
Element Case	: Steel		QLF15
Weight of RTI-KI Weight of RTI-KKI	: 11.4 lbs. (5.2 kg) : 14.5 lbs. (6.6 kg)		SSQLF15
Element Change Clearance	: KI Element = 9.0 (229 mm) KKI Element = 18.0 (457 mm) 27KI Element = 27.0 (686 mm)		QFD5

RTI Tank-Mounted Filter (Inside Out Flow)



Optional mounting rings (P/N A-LFT-813 and A-LFT-1448; see page 183 for details) available to weld to tank.

Metric dimensions in ().

Element Performance		Filtration Ra	atio Per ISO 4572/N particle counter (APC) ca	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171		
Information	Element	$\beta_x \ge 75$	$\beta_x \ge 100$	$\beta_x \ge 200$	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$
	KIZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KIZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KIZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	KIZ1	85	KKIZ1	181	27KIZ1	276
	KIZ3	88	KKIZ3	185	27KIZ3	283
	KIZ10	82	KKIZ10	174	27KIZ10	266

Element Collapse Rating: Flow Direction: Element Nominal Dimensions:

100 psid (7 bar) Inside Out KI: 3.9" (99 mm) O.D. x 9.0" (230 mm) long KKI: 3.9" (99 mm) O.D. x 18.0" (460 mm) long 27KI: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

Tank-Mounted Filter (Inside Out Flow) RTI

	Тур	pe Fluid	Appropriate Schroed	ler Media				Fluid	ST
Petrol	eum Base	d Fluids	All E (cellulose) and Z (synthetic) media					Compatibility	SKB
Hig	h Water (Content	All Z (synthetic) media				_		Housings
	Invert En	nulsions 10 and 25 μ Z (synthetic) media							МТА
	Water	Glycols	3, 5, 10 and 25 μ Z (sy	nthetic) media	ignation		_		MTR
	rnosphat	kvdrol®	3 5 10 and 25 17 7 5 10	(nthetic) media with H	ignation 15 seal designa:	tion (EPR seal	s and		
	-		stainless steel wire me	sh in element, and lig	ht oil coating or	n housing ext	erior)		21
								Skydrol is a registered	KT
								trademark of Solutia Inc.	RT
									RTI
-	Eler	ment	Element selections	are predicated on th	ne use of 150 S	SUS (32 cSt)		Element	KFT
Return	Series	Part No.	petroleum based fli	uid and a 25 psi (1.7	bar) bypass v	alve.		Selection	
Line Tank-	Z Media	Z10		KI	ккі	27KI		Based on Flow Rate	LRT
Mounted									BFT
	Flow	gpm (L(min)			90 1	05 1	20		QT
Shown abo	ove are the	elements mo	o st commonly used in this	s housing.	540 4	400 4	55		КТК
Note: Cor	ntact facto	ry regarding	g use of E Media in Hig	gh Water Content, In	vert Emulsion	and Water G	ilycol		Т
Applicatio	ons. For m	ore informa	ntion, refer to Fluid Co	mpatibility: Fire Resi	stant Fluids, pa	ages 19 and	20.		LIK
ΛΡ ι				Δ Ρ -1				Prossuro	Accessories for Tank- Mounted Filters
	for fluir	de with en a	- 0 86.	$\Delta P_{\text{slower}} = flow x element$	ement AP factor	x viscosity fa	ctor	Drop	PAF1
ιτι Δ F hous	ing for fruit	Flow (L/min)	- 0.80.	El. ΔP factors @ 150) SUS (32 cSt):			Information	MAE1
10 (50)) (150)	(250)	(350) (454)	KIZ10)8			Based on Flow Bate	IVIAF I
8			(0.50)	KKIZ10 .0 27KIZ10 .0)5)4			and Viscosity	MF2
· <u>s</u> 6			(0.50)						TF1
47 4				If working in units or by 54.9.	f bars & L/min, di	vide above fac	tor		KF3
2		S24 Port	(0.25)	Viscosity factor: Divid	de viscosity by 150	SUS (32 cSt).			LF1—2"
نياه	20 40) 100 120						MLF1
0	20 40	Flow gpm	100 120						CDIT
sp gr = spe Sizing of e	ecific gravity	y ould be based	d on element flow inform	 nation provided in the	Flement Selectic	on chart above	_		SKLI
512.119 01 0									RLT
									KF8
Notes				$\Delta \mathbf{P}_{\text{filter}} = \Delta \mathbf{P}_{\text{housing}}$	+ $\Delta \mathbf{P}_{element}$				К9
				Determine ∆P at 8 RTIKKIZ10P24NN u	30 gpm (300 L/ using 200 SUS (min) for 44 cSt) fluid			2K9
				Solution:					3K 9
				$\Delta P_{\text{housing}} = 3.0 \text{ ps}$	i [.20 bar]				QF15
				$\Delta P_{element} = 80 \text{ x}$.	05 x (200÷150)) = 5.3 psi			OI E4 F
				or = [300 x	(.05÷54.9) x (4	44÷32) = .38	8 barl		QLEID
				ΔP 3.0 ±	53 = 83 nci	,			SSQLF15
				or	2.5 – 0.5 psi				QFD5

= [.20 + .38 = .58 bar]

RTI Tank-Mounted Filter (Inside Out Flow)



Box 5. If using Port B, Port A & B must always be the same type and size. Example: (A) P20 (B) P20 (C) P16

NOTES:

Box 6. See also "Accessories for Tank-Mounted Filters," page 183.

Located

0

Port C

Visual

Electrical

opposite side of standard location

ESR = Electric switch mounted on opposite

side of standard location

ES1R = Heavy-duty electric switch with

conduit connector

Tank-Mounted Filter KFT



Features and Benefits

- Low pressure tank-mounted filter
- Meets HF4 automotive standard
- Multiple inlet/outlet porting options
- Top, side or bottom mounting
- Optional check valve prevents reservoir siphoning
- Can also be used in return line application (contact factory)
- Double and triple stacking of K-size element can be replaced by single KK or 27K-size element
- Allows consolidation of inventoried replacement elements by using K-size elements
- Also available with DirtCatcher[®] elements (KD & KKD)

Model No. of filter in photograph is KFT1K10P24P24NBY2.



INDUSTRIAL



TECHNOLOGY





7 bar	МТВ
	ZT
	KT
	RT
	RTI
	KFT
	LRT
	BFT
	QT
	КТК
	LTK
Applications	Accessories for Tank- Mounted Filters
	PAF1

100 gpm 380 L/min

100 psi

	PAF1
	MAF1
	MF2
	TF1
	KF3
	LF1—2"
	MLF1
	SRLT
	RLT
	KF8
na	K9
ications	2K9
	3K9
	QF15

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter K9
Max. Operating Pressure:	100 psi (7 bar)	Housing
Min. Yield Pressure:	400 psi (27 bar)	Specifications 2K9
Rated Fatigue Pressure:	Contact factory	ЗК9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)	0545
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 48 psi (3.3 bar)	QF15
Can [.]	Die Cast Aluminum (standard). Steel (ontional)	QLFTS
Element Case:	Steel	SSQLF15
Weight of KFT-1K: Weight of KFT-2K:	10.0 lbs. (4.5 kg) 13.6 lbs. (6.2 kg)	QFD5
Element Change Clearance:	8.0" (205 mm) for 1K; 17.50" (445 mm) for KK; 26.5" (673 mm) for 27K	

KFT Tank-Mounted Filter



Metric dimensions in ().

Element Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171 Using automated particle counter (APC) calibrated per ISO 4402 Performance $\beta_x \ge 100$ Element $\beta_x \ge 75$ $\beta_x \ge 200$ $\beta_x(c) \ge 200$ $\beta_x(c) \ge 1000$ Information К3 7.5 10.0 N/A N/A 6.8 K10 15.5 16.2 18.0 N/A N/A KZ1 <1.0 <1.0 <1.0 <4.0 4.2 KZ3 <1.0 <1.0 <2.0 <4.0 4.8 KZ5 2.5 3.0 4.0 4.8 6.3 KZ10 8.2 7.4 10.0 8.0 10.0 KZ25 18.0 20.0 22.5 19.0 24.0

Dirt Holding	Element	DHC (gm)								
Capacity	К3	54	ККЗ	108	27K3	162	-	-	-	-
	К10	44	KK10	88	27K10	132	-	-	-	-
	KZ1	112	KKZ1	224	27KZ1	336	KDZ1	89	KKDZ1	188
	KZ3	115	KKZ3	230	27KZ3	345	KDZ3	71	KKDZ3	150
	KZ5	119	KKZ5	238	27KZ5	357	KDZ5	100	KKDZ5	210
	KZ10	108	KKZ10	216	27KZ10	324	KDZ10	80	KKDZ10	168
	KZ25	93	KKZ25	186	27KZ25	279	KDZ25	81	KKDZ25	171

Element Collapse Rating: Flow Direction: Element Nominal Dimensions:

150 psid (10 bar) for standard elements Outside In K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long
Tank-Mounted Filter KFT

Pressure Element series Element to all 2 by 2 (synthetic) media Compatibility State (Minime (Minime Minime Compatibility Pressure Element series No and 2 by 2 (synthetic) media Minime Minime Minime Pressure Element before Element series If (Minime State (Minime Minime Pressure Element before Element series Element selections are predicated on the use of 150 SUS (22 c5) terms Element selection Element selections Element selections are predicated on the use of 150 SUS (22 c5) terms Element selection Element selection Element selections are predicated on the use of 150 SUS (22 c5) terms Element selection Element selection Element selections are predicated on the use of 150 SUS (22 c5) terms Element selection Element selection Element selections selection Element selections select		Ty	pe Fluid	Appropriate Schroed	ler Media					Fluid	ST	
High Water ContentAll 2 (synthetic) mediaMathematic Terminismic To and 25 μ 2 (synthetic) mediaWater Glycols3, 5, 10 and 25 μ 2 (synthetic) mediaWater GlycolsS, 10 and 25 μ 2 (synthetic) mediaSyster 0Syster 0 <th colspa<="" td=""><td>Petrol</td><td>eum Base</td><td>d Fluids</td><td>All E (cellulose) and Z (</td><td>synthetic) m</td><td>nedia</td><td></td><td></td><td></td><td>Compatibility</td><td>SKB</td></th>	<td>Petrol</td> <td>eum Base</td> <td>d Fluids</td> <td>All E (cellulose) and Z (</td> <td>synthetic) m</td> <td>nedia</td> <td></td> <td></td> <td></td> <td>Compatibility</td> <td>SKB</td>	Petrol	eum Base	d Fluids	All E (cellulose) and Z (synthetic) m	nedia				Compatibility	SKB
Invert Emulsions 10 and 25 µ 2 Synthetic) media MTA Water Gyrobs 3.1 St and 25 µ 2 Synthetic) media with H (ERS) seal dissignation and 3 and 10 µ 2 Phosphate Exters All Z Synthetici media with H (ERS) seal dissignation and 3 and 10 µ 2 Skythol 3.1 St and 25 µ 2 Synthetici media with H (ERS) seal dissignation and values and value and value and value and value and values and value and val	Hig	h Water (Content	All Z (synthetic) media					_		Housings	
Water Glycob3. 5. 10 and 25 p. // Synthetic metalsMilliPhosphate ExterAll (2) E (collulose) media with H (ER) seal designation and 3 and 10 µ E (collulose) media with H (ER) seal designation and 3 and 10 µ E (collulose) media with H (ER) seal designation and 3 and 10 µ E (collulose) media with H (ER) seal designation and 3 and 10 µ E (collulose) media with H (ER) seal designation and 3 and 10 µ E (collulose) media with H (ER) seal designation (EP) seals and statilises steel with media in element, and light oil costing on housing exterior)Stat designation (EP) seals and statilises steel with rester and 10 µ Element (ER) table physics value.Element Section (ER) seals and statilises steel with rester and table table physics value.Element Section (ER) seals and statilises steel with rester and table table physics value.Element Section (ER) Section (ER) seals and statilises steel with rester and table table physics value.Element Section (ER) Section (ER)Element (ER) Section (ER) Section (ER)Element (ER) Section (ER) Section (ER)Element (ER) Section (ER) Section (ER)Element (ER) Section (ER) <td></td> <td>Invert En</td> <td>nulsions</td> <td>10 and 25 μ Z (synthet</td> <td>ic) media</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>MTA</td>		Invert En	nulsions	10 and 25 μ Z (synthet	ic) media						MTA	
Phosphate Esters All 2 (synthetic) media with H (FR) seal designation and 3 and 10 µ T Skydrolf 3,5,10 and 25 µ 2 (synthetic) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation and W (water media) media with H. Seal designation (PR seal as designation and W (water media) media with H. Seal designation (PR seal as designation and W (water Security) media (PR seal as designation and W (PR seal as designation and W (PR seal as designation and W (PR seal as designation (PR seal as designatin) (PR sead designation (PR seal as designatin) (PR sea		Water	Glycols	3, 5, 10 and 25 µ Z (s)	nthetic) me	dia						
Skydrol ² 3, 5, 10 and 22 μ Z (synthetic) media with H.5 seal designation and W (voter mesh in element, and light oil casting on housing esterior) Signal and service mesh in element, and light oil casting on housing esterior) Signal H = registered to the use of 150 SUS (32 cS) Pressur Element Element selections are predicated on the use of 150 SUS (32 cS) Element Selection are predicated on the use of 150 SUS (32 cS) Element Selection are predicated on the use of 150 SUS (32 cS) Media X23 1X3 X23 [±] IX21 IX25 IX25 Media X23 1X21 X23 [±] IX21 IX25 IX25 Mount dial X23 1X21 X23 [±] IX25 IX25 IX25 Mount dial X23 [±] 1X21 X23 [±] IX25 IX25 IX25 Mount dial X23 [±] 1X21 X23 [±] IX25 IX25 IX25 Mount dial X225 1X22 X23 [±] IX25 IX25 IX26 Touble and triple stacking of K-size elements can be replaced by single KX & 27K elements, respectively. Some and 20. Pressure Pressure Motic constrat fractory regarding use of FMoil an IHBy Water Content, Invert Enulsion and Water Glycol Pressure Pressure Motic contert fractory regarding use of FMoil an IHBy Water Content, Invert Enulsion and Water Glycol IX2 I		Phosphat	e Esters	All Z (synthetic) media E (cellulose) media wit	n with H (EPI h H (EPR) se	R) seal designation al designation	n and 3 a	ind 10 μ			MTB	
Pressure Series Pert No. Element : Series : Pert No. Element : Series : Pert Series : Pert No. Element : Series : Pert No. Element : Series : Pert No. Element : Series : Pert Series : Pert Series : Pert No. Element : Series : Pert No. Element : Series : Pert Series :		9	5kydrol®	3, 5, 10 and 25 µ Z (sy	nthetic) me	dia with H.5 seal	designati	on and W	(water		21	
$\frac{ \mathbf{F}_{1} _{1}}{ \mathbf{F}_{1} _{1}} = \frac{ \mathbf{F}_{1} _{1}}{ \mathbf{K}_{2} _{1}} = \frac{ \mathbf{K}_{2} _{1}} _{1}}{ \mathbf{K}_{2} _{1}} = \frac{ \mathbf{K}_{2} _{1}} _{1}$				mesh in element, and	l.5 seal desig light oil coa	gnation (EPR seals ting on housing e	and stail xterior)	nless steel	wire		КТ	
PressureElement SeriesElement is to be performed as a first of the use of 150 SUS (32 cS) performed masked full and a 2 first of the transpass value.Figure transpass value.NeediaK10ZX10ZX10K12K10K12K					5	5 5				trademark of Solutia Inc.	RT	
$\frac{1}{1000} \frac{1}{1000} \frac{1}{1000$	Pressure	Elei Series	ment Part No	Element selections	are predica	ated on the use	of 150 Si	US (32 cS	t)	Element	RTI	
$\frac{k_{cl}}{k_{cl}} = \frac{k_{cl}}{k_{cl}} = k_$			K3	1K3	2	2K3†	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Selection	KET	
$\frac{ }{ } \frac{ }{ } \frac{ }{ } \frac{ }{ }$		E Media	K10	1K10		2K10	t			Flow Rate	KIT	
$\frac{\text{Line}}{\text{Mounted}} = \frac{\frac{1}{2} \frac{1}{\sqrt{23}} + \frac{1}{123} + \frac{1}{2} \frac{2}{\sqrt{23}} + \frac{1}{123} + \frac{1}{2} \frac{2}{\sqrt{23}} + \frac{1}{123} + \frac{1}{123} + \frac{1}{2} \frac{2}{\sqrt{23}} + \frac{1}{123} + \frac{1}{123}$	Return		K25		1K25			2K25†			LRT	
$\frac{Mounted}{Mounted} \begin{bmatrix} \frac{2}{\sqrt{2}} & \frac{1}{\sqrt{2}/2} &$	Line Tank-		KZ1	1KZ1	11/70	2KZ1	†	21/72+	_		BFT	
$\frac{Metria}{k \ge 0} \xrightarrow{K \ge 0} 1 \frac{1 \ K \ge 0}{k \ge 25} \frac{1 \ K \ge 2}{250} \frac{100}{360} \frac{100}{100} \frac{100}{(U \ min)} \frac{1}{0} \frac{5}{50} \frac{150}{50} \frac{250}{250} \frac{360}{360} \frac{100}{360} \frac{100}{100} \frac{100}{(U \ min)} \frac{1}{0} \frac{5}{50} \frac{150}{50} \frac{250}{360} \frac{360}{360} \frac{100}{100} \frac$	Mounted	Z	KZ3		1623			2KZ31 2K75†	<u> </u>			
$\frac{1}{100} \frac{102}{(Umin)} \frac{100}{0} \frac{40}{0} \frac{100}{0} \frac{100}{250} \frac{100}{380} \frac{100}{100} \frac{100}{100$		Media	KZ10		1	KZ10		ERES			QI	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			KZ25		1	KZ25					KTK	
$\frac{1}{10000} \frac{1}{10000} \frac{1}{10000} \frac{1}{10000} \frac{1}{100000} \frac{1}{10000000000000000000000000000000000$		Flow	gpm	0 40		60	80		100		ІТК	
tbouble and triple stacking of K-size elements can be replaced by single KK & 27K elements, respectively. Shown above are the elements most commonly used in this housing. Note: Contact factory regarding use of Z 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. $\frac{\Delta P_{lement}}{RFT \Delta P_{locating}} for fluids with sp gr = 0.86: Flow (L/min) g_{0}^{0} = \frac{\Delta P_{element}}{100000000000000000000000000000000000$		11000	(L/min)	50 150		250			380		LIK	
$\frac{\Delta P_{element}}{E} = M_{nousing} for fluids with sp gr = 0.86:$ Flow (L/min) $\frac{10}{9} = \frac{1}{9} = \frac{1}$	Shown abo Note: Con Applicatic	ove are the ntact facto ons. For m	elements mo ory regarding ore informa	st commonly used in this a use of E Media in Hig tion, refer to Fluid Co	s housing. gh Water Co mpatibility.	ontent, Invert En : Fire Resistant Fi	nulsion a luids, pag	nd Water ges 19 an	[.] Glycol d 20.	Pressure	Mounted Filters PAF1	
$\frac{\text{KFT} \Delta P_{\text{housing}} \text{ for fluids with sp gr = 0.86:}}{\text{Flow (L/min)}}$ $\frac{10}{9} \begin{pmatrix} 50 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (150$	housing				element	(I I	D ((Drop	MAF1	
$\frac{10}{9} \begin{pmatrix} 50 & (150) & (150) & (250) \\ 10 & (150) & (250) & (350) \\ 10 & (150) & (150) & (150) & (350) \\ 10 & (150) & (150) & (150) & (350)$	KFT Δ P _{hou}	_{sing} for flui	ids with sp g	r = 0.86:	$\frac{\Delta P_{\text{element}}}{Fl} = \frac{\Delta P_{\text{element}}}{Fl}$	\approx flow x element Δ	2 cSt	k viscosity		Information	MED	
$\frac{1}{2} \frac{1}{2} \frac{1}$	10	(50) (1	150) (250)) (350)		1K 2K	2 (31).	16	эк	Based on	IVIEZ	
$\frac{1}{9} \frac{1}{9} \frac{1}$					К3	.25 .12		<u></u>		Flow Rate and Viscosity	TF1	
$\frac{P_{g}}{P_{g}} = \frac{1}{4} + \frac{1}{4$	°		·••		K10 K25	.09 .05 .02 .01					KF3	
$\frac{2}{0} \underbrace{\int_{0}^{0} \frac{1}{20} \frac{1}{40} \frac{1}{60} \frac{1}{80} \frac{1}{100}}{F_{\text{low gpm}}} = \frac{1}{100} \frac{1}{100}$	isd d∆			AP (bar)	KZ1 KZ3 K75	.20 .10 .10 .05 .08 .04	KDZ1 KDZ3 KDZ5	.24 .12 1	.12 .06 05		LF1—2"	
$\frac{0}{0} \underbrace{\frac{1}{20} \underbrace{\frac{1}{40}}{60} \underbrace{\frac{5}{80} \underbrace{\frac{1}{100}}{100}}_{\text{Flow gpm}} $ If working in units of bars & L/min, divide above factor by 54.9. <i>Viscosity factor:</i> Divide viscosity by 150 SUS (32 cst). Sizing of elements should be based on element flow information provided in the Element Selection chart above. $\frac{AP_{\text{fitter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}}{Exercise:}$ Determine ΔP at 80 gpm (300 L/min) for KFT2K10P24 using 200 SUS (44 cst) fluid. $\frac{\Delta P_{\text{housing}} = 3 \text{ psi } [.25 \text{ bar}]}{\Delta P_{\text{element}}} = [300 \times (.05 \div 54.9) \times (44 \div 32) = .37 \text{ bar}]}$ $\Delta P_{\text{total}} = 3.0 + 5.3 = 8.3 \text{ psi}$ $= [.25 + .37 = .62 \text{ bar}]$	2			(0.25)	KZ10 KZ25	.05 .03 .04 .02	KDZ1 KDZ2	0 .06 5 .04	.03 .02		MLF1	
Flow gpmViscosity factor: Divide viscosity by 150 SUS (32 cst).RLTSizing of elements should be based on element flow information provided in the Element Selection chart above.KF8Notes $\Delta P_{filter} = \Delta P_{housing} + \Delta P_{element}$ K9Exercise: Determine ΔP at 80 gpm (300 L/min) for KFT2K10P24 using 200 SUS (44 cSt) fluid.2K9Solution: $\alpha P_{housing} = 3 psi [.25 bar]$ QF15 $\Delta P_{element} = 80 \times .05 \times (200 \div 150) = 5.3 psi$ $\alpha r= [.300 \times (.05 \div 54.9) \times (44 \div 32) = .37 bar]SSQLF15\Delta P_{total} = 3.0 + 5.3 = 8.3 psi\alpha r= [.25 + .37 = .62 bar]QFD5$	٥	20	40 60	80 100	lf working by 54.9.	in units of bars &	L/min, div	ide above †	factor		SRLT	
Notes $\Delta P_{fitter} = \Delta P_{housing} + \Delta P_{element}$ KF8Notes $\Delta P_{fitter} = \Delta P_{housing} + \Delta P_{element}$ K9Exercise: Determine ΔP at 80 gpm (300 L/min) for KFT2K10P24 using 200 SUS (44 cSt) fluid.3K9 $\Delta P_{housing} = 3 psi [.25 bar]$ $\Delta P_{housing} = 3 psi [.25 bar]$ QF15 $\Delta P_{element} = 80 \times .05 \times (200 \div 150) = 5.3 psi$ or $= [300 \times (.05 \div 54.9) \times (44 \div 32) = .37 bar]$ SSQLF15 $\Delta P_{total} = 3.0 + 5.3 = 8.3 psi$ $= [.25 + .37 = .62 bar]$ QFD5	sp gr = spe	cific gravit	Flow gpm y		Viscosity f	factor: Divide viscosi	ty by 150 S	US (32 cSt).			RLT	
Notes $\Delta r mer = \Delta r nousing + \Delta r element$ k9Exercise: Determine ΔP at 80 gpm (300 L/min) for KFT2K10P24 using 200 SUS (44 cSt) fluid.2K9Solution: $\Delta P_{housing} = 3 psi [.25 bar]$ 3k9 $\Delta P_{housing} = 3 psi [.25 bar]$ QF15 $\Delta P_{element} = 80 \times .05 \times (200 \div 150) = 5.3 psi$ or $= [300 \times (.05 \div 54.9) \times (44 \div 32) = .37 bar]$ SSQLF15 $\Delta P_{total} = 3.0 + 5.3 = 8.3 psi$ or $= [.25 + .37 = .62 bar]$ QFD5	Sizing of ei	iements sn		i on element flow inform			Selection	i chart abo	ove.		KF8	
$ \begin{array}{c c} Determine \Delta P at 80 gpm (300 L/min) for \\ KFT2K10P24 using 200 SUS (44 cSt) fluid. \\ \hline Solution: \\ \hline \Delta P_{housing} = 3 psi [.25 bar] \\ \hline \Delta P_{element} = 80 x .05 x (200 \div 150) = 5.3 psi \\ or \\ = [300 x (.05 \div 54.9) x (44 \div 32) = .37 bar] \\ \hline \Delta P_{total} = 3.0 + 5.3 = 8.3 psi \\ or \\ = [.25 + .37 = .62 bar] \\ \hline \end{array} $	Notes				Evercise:	housing T ΔI el	ement				K9	
$\frac{Solution:}{\Delta P_{housing}} = 3 \text{ psi} [.25 \text{ bar}] $ $\frac{\Delta P_{housing}}{\Delta P_{element}} = 80 \times .05 \times (200 \div 150) = 5.3 \text{ psi} \qquad QF15$ $\frac{\Delta P_{element}}{\sigma r} = [300 \times (.05 \div 54.9) \times (44 \div 32) = .37 \text{ bar}] $ $\Delta P_{total} = 3.0 + 5.3 = 8.3 \text{ psi} \qquad QFD5$ $= [.25 + .37 = .62 \text{ bar}]$					Determii	ne ΔP at 80 gpm	(300 L/n	nin) for t) fluid			2K9	
					Solution		23 ++) 00	ty nulu.			3K9	
$\Delta P_{element} = 80 \times .05 \times (200 \div 150) = 5.3 \text{ psi}$ $= [300 \times (.05 \div 54.9) \times (44 \div 32) = .37 \text{ bar}]$ $\Delta P_{total} = 3.0 + 5.3 = 8.3 \text{ psi}$ $= [.25 + .37 = .62 \text{ bar}]$					$\Delta P_{housing}$	= ₁ = 3 psi [.25 bar]				QF15	
$\Delta P_{\text{total}} = [.25 + .37 = .62 \text{ bar}]$					$\Delta P_{element}$	t = 80 x .05 x (20	0÷150) =	= 5.3 psi			OLF15	
$\Delta P_{\text{total}} = 3.0 + 5.3 = 8.3 \text{ psi}$ or $= [.25 + .37 = .62 \text{ bar}]$ QFD5						or = [300 x (.05÷5	4.9) x (4	4÷32) = .	37 bar]		SSOLF15	
= [.25 + .37 = .62 bar]					ΔP_{total}	= 3.0 + 5.3 = 8.	3 psi				OFD5	
						= [.25 + .37 = .6	52 bar]					



How to Build a Valid Model Number for a Schroeder KFT:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
KFT -	-		-	-			-	-

Model Number **Selection**

Filter

Example: NOTE: Only box 9 may contain more than one option

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9 = KFT1KZ10WS20NS20NNB KFT - 1 - KZ10 - W - S20 N S20 N N - B

BOX 1	BOX 2				BOX 3		BOX 4
Filter Series	Number of Elements			E	ement Part Number		Seal Material
KFT	1 2	K Length K3 K10 K25 KZ1 KZ3 KZ5 KZ10 KZ25 KDZ1	KK Length KK3 KK10 KK25 KK21 KK23 KK25 KK210 KK225 KKD21	27K Length 27K3 27K10 27K25 27K21 27K23 27K25 27K210 27K225	 3 μ E media (cellulose) 10 μ E media (cellulose) 25 μ E media (cellulose) 1 μ Excellement[®] Z media (synthetic) 3 μ Excellement Z media (synthetic) 5 μ Excellement Z media (synthetic) 10 μ Excellement Z media (synthetic) 25 μ Excellement Z media (synthetic) 25 μ Excellement Z media (synthetic) 25 μ Excellement Z media (synthetic) 	On H	nit = Buna N H = EPR W = Buna N 1.5 = Skydrol® compatibility
Inlet Portin	g Location	KDZ5 KDZ10 KDZ25	KKDZ5 KKDZ10 KKDZ25		= DirtCatcher 5 μ Excellement Z media = DirtCatcher 10 μ Excellement Z media = DirtCatcher 25 μ Excellement Z media		



Port #2

Ρ Р

P P

S S

BOX 5 Specification of all 4 ports is required

	Inlet Por	rting	
Port 1 (Standard)	Port 2 (Optional)	Port 3 (Optional)	Port 4 (Optional)
N = None P2 = ½" NPTF P4 = ¼" NPTF P8 = ½" NPTF P12 = ¾" NPTF P16 = 1" NPTF P20 = 1½" NPTF P24 = 1½" NPTF	N = None P2 = $\frac{1}{4}$ " NPTF P4 = $\frac{1}{4}$ " NPTF P8 = $\frac{1}{4}$ " NPTF P12 = $\frac{3}{4}$ " NPTF P16 = 1" NPTF P20 = $\frac{1}{4}$ " NPTF P24 = $\frac{1}{2}$ " NPTF	N = None P2 = $\frac{1}{4}$ " NPTF P4 = $\frac{1}{4}$ " NPTF P8 = $\frac{1}{2}$ " NPTF P12 = $\frac{3}{4}$ " NPTF P16 = 1" NPTF P20 = $\frac{1}{4}$ " NPTF P24 = $\frac{1}{2}$ " NPTF	N = None P2 = $\frac{1}{4}$ " NPTF P4 = $\frac{1}{4}$ " NPTF P8 = $\frac{1}{2}$ " NPTF P12 = $\frac{3}{4}$ " NPTF P16 = 1" NPTF P20 = $\frac{1}{4}$ " NPTF P24 = $\frac{1}{2}$ " NPTF
S4 = SAE-4 S8 = SAE-8 S12 = SAE-12 S16 = SAE-16 S20 = SAE-20 S24 = SAE-24	S4 = SAE-4 S8 = SAE-8 S12 = SAE-12 S16 = SAE-16 S20 = SAE-20 S24 = SAE-24	S4 = SAE-4 S8 = SAE-8 S12 = SAE-12 S16 = SAE-16 S20 = SAE-20 S24 = SAE-24	S4 = SAE-4 S8 = SAE-8 S12 = SAE-12 S16 = SAE-16 S20 = SAE-20 S24 = SAE-24
F24 = 1½" SAE 4-bolt flange Code 61 F32 = 2" SAE 4-bolt flange Code 61	F24 = 1½" SAE 4-bolt flange Code 61 F32 = 2" SAE 4-bolt flange Code 61		

BOX 6

ng

e

et Poi	rting		Outlet Port
al)	Port 3 (Optional)	Port 4 (Optional)	Omit = 1½" NPTM
:	N = None P2 = ½" NPTF P4 = ¼" NPTF P3 = ½" NPTF P12 = ¾" NPTF P16 = 1" NPTF P20 = 1¼" NPTF P24 = 1½" NPTF	N = None P2 = ½" NPTF P4 = ¼" NPTF P8 = ½" NPTF P12 = ¾" NPTF P16 = 1" NPTF P20 = 1½" NPTF P24 = 1½" NPTF	N = Non-threa T = 13" non-th tube C = Check valv D = Diffuser CD = Check valv & diffuser
	S4 = SAE-4	S4 = SAE-4	

=	1½ "	NPTM
	NI	ام م در دا ا

ded hreaded

'e

NOTES:

- Box 2. Number of elements must equal 1 when using KK or 27K elements.
- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. K specifies one 9" element; KK specifies one 18" element; 27K specifies one 27" element. Examples: KKZ10; 27KZ3
- Box 4. For options H, W, and H.5 all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.
- Box 6. See also "Accessories for Tank-Mounted Filters," page 183.

BOX 7

Optional Mounting Flange **Dirt Alarm® Options** Omit = None Omit = None Y2 = Back-mounted tri-color gauge (Port 4) (Not available with 4 ports) B = Flange with 4 holes Visual Y2C = Bottom-mounted gauge in cap BW = Flange with Y5 = Back-mounted gauge in cap no holes ES = Electric switch (located on filter housing - not available with 4 ports) Electrical ES1 = Heavy-duty electric switch with conduit connection

BOX 8

BOX 9	9
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Additional Options Omit = None G2293 = Cork gasket G820 = Stamped cap M = Metric thread for SAE 4-bolt flange mounting holes (specify after each F port designation)

SAME DAY SHIPMENT MODEL AVAILABLE!

Tank-Mounted Filter LRT

LRT



Element Change Clearance:

17.0" (435 mm)

LRT Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!





	1½" Ports 4-Bolt Flange Only	2" Ports	All Other Porting
Port to Port	7.12"	7.56" (P, S, B) 7.38" (F)	6.38"
€ to Casting Base	1.75"	1.81"	1.56"
L to lank lop	2.06"	2.12"	1.88"

Optional mounting ring available to weld to tank.

Metric dimensions in ().

Element Performance		Filtration Ra	atio Per ISO 4572/M particle counter (APC) c	NFPA T3.10.8.8 alibrated per ISO 4402	Filtration Ratio	wrt ISO 16889 ted per ISO 11171
Information	Element	β _x ≥ 75	$\beta_x \ge 100$	$\beta_x \ge 200$	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$
mormation	18L3	6.8	7.5	10.0	N/A	N/A
	18L10	15.5	16.2	18.0	N/A	N/A
	18LZ1	<1.0	<1.0	<1.0	<4.0	4.2
	18LZ3	<1.0	<1.0	<2.0	<4.0	4.8
	18LZ5	2.5	3.0	4.0	4.8	6.3
	18LZ10	7.4	8.2	10.0	8.0	10.0
	18LZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)
Capacity	18L3	110		
	18L10	88		
	18LZ1	200	18LDZ1	150
	18LZ3	205	18LDZ3	119
	18LZ5	228	18LDZ5	167
	18LZ10	203	18LDZ10	133
	18LZ25	184	18LDZ25	135
	Element	t Collapse Rating: Flow Direction: ninal Dimensions:	150 psid (10 bar) Outside In 4.0" (100 mm) O.	.D. x 18.5" (470 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE! Tank-Mounted Filter LRT

Type Fluid	Appropriate Schroeder Media	Fluid	ST
Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	SKR
High Water Content	All Z (synthetic) media		Housings
Invert Emulsions	10 and 25 μ Z (synthetic) media		МТА
Water Glycols	3, 5, 10 and 25 μ Z (synthetic) media		
Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation		MTB
Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)	Skydrol is a registered trademark of Solutia Inc.	ZT

Pressure	Eler Series	nent Part No.	Eler pet	nent selectic roleum base	ons are pred d fluid and a	icated on th a 25 psi (1.7	e use of 150 bar) bypass) SUS (32 valve.	cSt)	
		18LZ1			18L	.Z1			See BFT	-
Return		18LZ3				18LZ3				
Line Tank-	Z Media	18LZ5				18LZ5				
Mounted		18LZ10				18LZ10				
		18LZ25				18LSZ25				
		gpm	0	25	50	75	100	125	15	0
	FIOW	(L/min)	0	100	200	300	400		57	0

Shown above are the elements most commonly used in this housing.

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.



Solution:

$\Delta P_{\text{housing}}$	= 3.0 psi [.20 bar]	
$\Delta P_{element}$	= 120 x .04 x (200÷150) = 6.4 psi or = [455 x (.04÷54.9) x (44÷32) = .45 bar]	
ΔP_{total}	= 3.0 + 6.4 = 9.4 psi or = [.20 + .45 = .65 bar]	

LRT

SCHROEDER INDUSTRIES 165

.RT Tank-Mounted Filter SAME DAY SHIPMENT MODEL AVAILABLE!



- numbers are a combination of Boxes 2, 3, and 4. Example: 18L3W
- all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.
- Box 5. If using Port B, Port A & B must always be the same type and size. Example: (A) P20 (B) P20 (C) P16
- Box 6. See also "Accessories for Tank-Mounted Filters," page 183.

Tank-Mounted Filter **BFT**



BFT Tank-Mounted Filter



Metric dimensions in ().

Element Performance		Filtration Ra Using automated	atio Per ISO 4572/I particle counter (APC) c	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171		
Information	Element	β _x ≥ 75	β _x ≥ 100	β _x ≥ 200	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$
	BB/BL10	15.5	16.2	18.0	N/A	N/A
	BB/BLZ1	<1.0	<1.0	<1.0	<4.0	4.2
	BB/BLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	BB/BLZ5	2.5	3.0	4.0	4.8	6.3
	BB/BLZ10	7.4	8.2	10.0	8.0	10.0
	BB/BLZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holdina 📕	Element	DHC (gm)		Element	DHC (gm)	Element	DHC (gm)
Capacity	BB10	132					
	BBZ1	268		BBDZ1	205	BLZ1	536
	BBZ3	275		BBDZ3	163	BLZ3	550
	BBZ5	301		BBDZ5	229	BLZ5	550
	BBZ10	272		BBDZ10	183	BLZ10	550
	BBZ25	246		BBDZ25	186	BLZ25	550
	Eleme	ent Collapse Rating:	150) psid (10 bar)			

Flow Direction: Outside In

Element Nominal Dimensions: BB: 5.0" (125 mm) O.D. x 18.0" (460 mm) long

BL: 5.0" (125 mm) O.D. x 36.0" (920 mm) long

Tank-Mounted Filter **BFT**

	Ту	pe Fluid	Appropriate Schroe	eder Med	lia					Fluid	ST
Petrol	eum Base	d Fluids	All E (cellulose) and Z	2 (synthet	c) media	а				Compatibility	SKB
Hig	h Water	Content	All Z (synthetic) medi	а							Housings
	Invert En	nulsions	10 and 25 μ Z (synth	etic) med	ia						MTA
_	Water	Glycols	3, 5, 10 and 25 μ Z (synthetic	media	[.] ?			_		МТР
	Phosphat	e Esters	All Z (synthetic) med	ia with H	(EPR) Se	eal desi	Ignation	cignation (EDR (soals and		IVIID
	-	skyuror	stainless steel wire m	i, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and tainless steel wire mesh in element, and light oil coating on housing exterior)							ZT KT
	Ele	ment	Element selections	are predi	cated o	n the u	use of 150	SUS (32 cSt) p	etroleum	Element	RT
Pressure	Series	Part No. BB10	based fluid and a 2	5 psi (1.7	bar) byp	oass va	lve (with	Check valve op	tion).	Selection	RTI
	Media	BB10 BB25			1BB2	25	500			Based on	
Return Line		BBZ1		BBZ1*				BLZ1		now nate	KFI
Tank-	Z	BBZ3 BBZ5		BBZ:	RR7	'5		BLZ3			LRT
Wounted	Media	BBZ10			BBZ1	10					BFT
		BBZ25			BBZ2	25		1			
	Flow	gpm	0 100	15)	20	0	250	300		QT
Character a har		(L/min)	0 400	6	500	8	800	1000	1150		КТК
*Note: Add housing r	ditional per pressure dre	elements mo r element flov op graph belo	w is available up to 300 w.	gpm who	g. en using	BFT filt	ter withou	t check valve op	otion. See		LTK
Note: Con Applicatio	ntact facto ons. For m	ry regarding ore informa	g use of E Media in H tion, refer to Fluid C	ligh Wate ompatib	er Conte ility: Fir	ent, In re Resis	vert Emul stant Flui	lsion and Wate ds, pages 19 ai	er Glycol nd 20.		Accessories for Tank- Mounted Filters
Δ Γ housing					nent					Pressure	PAF1
BFT ΔP _{hot}	_{using} for flu	ids with sp g	gr = 0.86:	$\frac{\Delta P_{eler}}{E I \wedge I}$	nent= flov	w x ele	ement ΔP f	actor x viscosity	/ factor	Information	
10 ⁽⁴	100) (6	008) (008)	(1000)	LI. ΔI	ractors	DD	рі (52 с		PPD	Based on	MAF1
				BB1	0	.03	<u>.01</u>			Flow Rate	MF2
			(0.50)	BB2	5	.01	.01			and viscosity	TF1
, psi		, KV	ALVE	BBZ	1	.07	.04	BBDZ1	.08		
₫ 4		NI CHEC	(0.25)	BBZ	5 5	.05 .04	.03	BBDZ3 BBDZ5	.06		KF3
2		WIO CHE	CKVA	BBZ	10	.03	.02	BBDZ10	.04		LF1—2"
0				BBZ	25	.02	.01	BBDZ25	.02		MI F1
1	00 150	200 Flow gpm	250 300	If wor by 54	king in ι .9.	units of	bars & L/m	nin, divide above	factor		IVILI I
sp gr = spe	cific gravit	у		Visco	sity facto	o <i>r:</i> Divid	le viscosity b	oy 150 SUS (32 cSt)			SRLT
Sizing of e	lements sh	ould be based	on element flow info	rmation p	rovided	in the I	Element Se	election chart ab	ove.		RLT
				۸ D	_ ^ P)	Ι Δ Ρ .				KF8
Notes					ise:	housing	τ Δr elem	ent			К9
				Dete for P	rmine A	AP at 1	60 gpm (600 L/min)	fluid		2K9
				Solu	tion:	51 C12	using 20	0 505 (44 650)	nulu.		3K9
				ΔP _{ho}	$u_{sing} = 2$	2.5 psi	[.20 bar]				OF15
				ΔP_{olo}	= ⁻	160 x .	05 x (200	÷150) = 10.7 p	si		Q. 15
				- ele	(or	(05 - 50) ((()			QLF15
					=	1600 x	(.05÷54.9	9) x (44÷32) =	.8 bar]		SSQLF15
				ΔP_{tot}	al = 2	2.5 + 1 or	0.7 = 13.2	2 psi			QFD5
					=	[.20 + .	.8 = 1.0 b	ar]			





- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. E media elements are only available with Buna N seals.
- Box 4. For options H, W, and H.5 all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.
- Box 7. See also "Accessories for Tank-Mounted Filters," page 183.

Tank-Mounted Filter **QT**



QT Tank-Mounted Filter



Metric dimensions in ().

Element Performance	Ele	ment	Filtration Rati Using automated par $\beta_x \ge 75$	ticle counter (APC) calibra $\beta_x \ge 100$	$\begin{array}{l} \mbox{Filtration Ratio wrt ISO 16889} \\ \mbox{Using APC calibrated per ISO 11171} \\ \mbox{$\beta_x(c) \geq 200$} \mbox{$\beta_x(c) \geq 1000$} \end{array}$		
Information		Z1/CLQZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
		Z3/CLQZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	16Q	Z5/CLQZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
		Z10/CLQZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
		Z25/CLQZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0
		Z1/CLQZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
		Z3/CLQZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
39	39Q	Z5/CLQZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
		Z10/CLQZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
		Z25/CLQZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Ele	ement	DHC (gm)		Eleme	nt DHC (gm)		Element	DHC (gm)
Capacity		Z1	276		CLQZ1	307		PMLZ1	307
		Z3	283		CLQZ3	315		PMLZ3	315
	16Q	Z5	351		CLQZ5	364		PMLZ5	364
		Z10	280		CLQZ10	306		PMLZ10	330
		Z25	254		CLQZ2	5 278		PMLZ25	299
		Z1	974		CLQZ1	1259		PMLZ1	1485
		Z3	1001		CLQZ3	1293		PMLZ3	1525
	39Q	Z5	954		CLQZ5	1199		PMLZ5	1235
		Z10	940		CLQZ10	1214		PMLZ10	1432
		Z25	853		CLQZ2	5 1102		PMLZ25	1299
		Element Collapse Rating: Flow Direction: Element Nominal Dimensions:		Q an Outs	id QPML: ide In	150 psid (10 bar)		(420)	
	E			16Q: 16QI 39Q:	PML:	6.0" (150 mm) O.D. x 6.0" (150 mm) O.D. x 6.0" (150 mm) O.D. x	16.85 16.00' 38.70'	' (430 mm) lor ' (405 mm) lor ' (985 mm) lor	າg າg າg

39QPML:

6.0" (150 mm) O.D. x 37.80" (960 mm) long

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Tank-Mounted Filter QT

	1	ype Fluid	Арр	propriate Schroe	eder Media						Fluid	ST
Petro	leum Ba	sed Fluids	All E	E (cellulose) and Z	' (synthetic) r	nedia					Compatibility	SKB
Hiç	gh Wate	r Content	All Z	(synthetic) medi	a							Housings
	Wat	er Glycols	10 a	10 and 25 μ Z (synth 10 and 25 μ Z (synthetic) me	edia						MTA
	Phosph	ate Esters	All 1	Z (synthetic) med	lia with H (EP	PR) seal	designatio	า				МТВ
				·			-					71
					_							DT
Pressure	El Series	ement Part No.		Element select petroleum bas	tions are pre red fluid and	edicate d a 30	ed on the u psi (2.1 ba	use of 1 r) bypas	50 SUS ss valve	(32 cSt)	Element	
		16 & 39QZ1 16 & 39QZ3		16QZ1	390 73	QZ1	39073				Based on	
		16 & 39QZ5		16Q	Z5		39QZ5	200	740		Flow Rate	KFT
To 100 pci	Z	16 & 39QZ10 16 & 39QZ25			16Q210 16QZ2	5 & 39	QZ25	39Q.	210			LRT
(7 bar)	Media	16 & 39QPML	Z1	16QPMLZ1	39Q	PMLZ1						
		16 & 39QPML	. <u>Z3</u> .Z5	16QPMI 16QPMI	.Z3		39QPMLZ3 39QPMLZ5					BEI
		16 & 39QPML	Z10	16QPN	1LZ10	1725	39QP	MLZ10				QT
			.225	0 150	200	3	00	40	39QPIVILZZ	5 150		ктк
	Flow	(L/min)	(0 500		1000		150	00 1	700		ITK
Shown ab	ove are th	ne elements mo	st cor	mmonly used in th	his housing.							
Applicati	ons. For	more informa	g use ition,	refer to Fluid C	ompatibility	onten r: Fire I	t, invert En Resistant Fi	luids, pa	iges 19	and 20.		Accessories for Tank- Mounted Filters
$\Delta \mathbf{P}_{housing}$					$\Delta \mathbf{P}_{element}$						Pressure	DAFA
QT $\Delta \mathbf{P}_{hou}$	_{using} for fl	uids with sp g	r = 0.	.86:	$\Delta P_{element}$	= flow	x element 🛆	P factor	x viscos	ity factor	Drop	PAFI
	10	Flow (L/m (500) (1000	in))) ((1500) (1700)	El. ∆P fa	ctors @	0 150 SUS (3	2 cSt):			Information Based on	MAF1
				(0.75)	16QZ1 16QZ3		.09 .04	39QZ 39QZ	1 3	.03 .02	Flow Rate	MF2
					16QZ5		.04	39QZ	5	.02	and Viscosity	
SI.	8	·	· ·	(0.50) ₋	16QZ25		.01	39QZ	25	.01		11-1
∆Pp				P (ba	16QPML 16QPML	Z1 Z3	.08 .05	39QP 39QP	MLZ1 MLZ3	.03 .02		KF3
	4	Porti		<pre></pre> (0.25)	16QPML	Z5	.05	39QP	MLZ5	.02		F1—2"
		PAD			16QPML	Z25	.02	39QP	MLZ25	.01		MI F1
	0 1	00 200 3 Flow gpr	800 n	400 450	If working by 54.9.	g in uni	its of bars &	L/min, div	/ide abov	ve factor		CRIT
sp gr = spe	ecific grav	vity			Viscosity	factor:	Divide viscosi	ty by 150 S	SUS (32 cs	st).		DIT
Sizing of e	elements	should be based	d on e	element flow info	rmation provi	ded in	the Element	Selectio	n chart a	above.		
Notes					$\Delta \mathbf{P}_{\text{filter}} =$	$\Delta \mathbf{P}_{hous}$	sing + $\Delta \mathbf{P}_{ele}$	ment				KFð
					Exercise: Determin	ne ΛΡ a	at 200 apm	(7571/	min) fo	r		K9
					QT39QZ3	VP48E	D5C using 2	200 SUS	(44 cSt)) fluid.		2K9
					Solution:							3K9
					$\Delta P_{housing}$	= 1.5	psi [.10 baı	·]				QF15
					$\Delta P_{element}$	= 200) x .04 x (20)0÷150)	= 10.7	psi		QLF15
						= [75	7 x (.04÷54	l.9) x (44	4÷32) =	.76 bar]		SSQLF15
					ΔP_{total}	= 1.5	+ 10.7 = 12	.2 psi				OFDS
						or = [.10	+ .76 = .86	bar]				נעוס
L												





NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. *Example*: 16QZ1
- Box 3. E-media elements are also available for the QT filter housing. Contact Schroeder for more information. Contact Schroeder for information on the usage of QCLQF coreless elements.
- Box 4. For Option W, Box 3 must equal Q.
- Box 5. Viton is a registered trademark of DuPont Dow Elastomers. All elements for this filter are supplied with Viton seals. Seal designation in Box 5 applies to housing only.

Tank-Mounted Filter Kit KTK



100 gpm <i>380 L/min</i>	ST SKB Housings
100 psi	MTA
7 bar	MTB
	ZT
	KT
	RT
	RTI
	KFT
	LRT
	BFT
	QT
	КТК



Applications	Accessorie for Tank Mounted Filter
	PAF
	MAF
	MF
	TF
	KF
	LF1—2
	MLF
	SRL
_	RL
	KF
Filter Housing	K
Specifications	2K
	3K

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter
Max. Operating Pressure:	100 psi (7 bar) exclusive of tank design	Housing
Min. Yield Pressure:	Contact factory	Specifications 2K9
Rated Fatigue Pressure:	Contact factory	3K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)	0545
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 40 psi (2.8 bar)	QFI5 OLF15
Porting Cap: Weld Ring:	Die Cast Aluminum Steel	SSQLF15
Element Change Clearance:	8.0" (205 mm) for K; 17.50" (445 mm) for KK; 26.5" (673 mm) for 27K	QFD5

KTK Tank-Mounted Filter Kit



Element Performance	Element	Filtration Rates Using automated $\beta_x \ge 75$	atio Per ISO 4572/I particle counter (APC) c $\beta_x \ge 100$	Filtration Ratio wrt ISO 16889Using APC calibrated per ISO 11171 $\beta_x(c) \ge 200$ $\beta_x(c) \ge 1000$		
Information	К3	6.8	7.5	10.0	N/A	N/A
	K10	15.5	16.2	18.0	N/A	N/A
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	К3	54	KK3	108	27K3	162
	K10	44	KK10	88	27K10	132
	KZ1	112	KKZ1	224	27KZ1	336
_	KZ3	115	KKZ3	230	27KZ3	345
	KZ5	119	KKZ5	238	27KZ5	357
	KZ10	108	KKZ10	216	27KZ10	324
	KZ25	93	KKZ25	186	27KZ25	279
	Elemer	nt Collapse Rating: Flow Direction:	150 psid (10 ba Outside In	r) for standard elemer	its	

Element Nominal Dimensions: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

Tank-Mounted Filter Kit KTK

Type Fluid	Appropriate Schroeder Media	Fluid	
Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	S
High Water Content	All Z (synthetic) media	l l	Housin
Invert Emulsions	10 and 25 μ Z (synthetic) media		M
Water Glycols	3, 5, 10 and 25 μ Z (synthetic) media		IVI
Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation and 3 and 10 μ E (cellulose) media with H (EPR) seal designation		Μ
Skydrol [®]	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)		
		Skydrol is a registered trademark of Solutia Inc.	

KTK

LTK

$\Delta \mathbf{P}_{element}$				Pressure	Мо
$\Delta P_{element} = f$	low x elemer	nt ΔP factor x	viscosity factor	Drop	
El. ΔP facto	ors @ 150 SUS	S (32 cSt):		Information	
	1K	KK	27K	Based on	
K3 K10 K25 KZ1 KZ3 KZ5 KZ10 KZ25	.25 .09 .02 .20 .10 .08 .05 .04	.12 .05 .01 .10 .05 .04 .03 .02	.08 .03 .01 .05 .03 .02 .02 .01	Flow Rate and Viscosity	
If working i by 54.9.	n units of bars	s & L/min, divi	de above factor		LF
Viscosity fa	ctor: Divide vis	cosity by 150 Sl	JS (32 cSt).		
					SS
			,		

Notes

KTK Tank-Mounted Filter Kit



В	U,	X	5	

Dirt Alarm [®] Options				
	Omit = None			
Visual	Y2C = Bottom-mounted gauge in cap			

NOTES:

- Box 3. Replacement element part numbers are identical to contents of Boxes 2, 3, and 4.
- Box 4. For options H and W, cap is anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.

Tank-Mounted Filter Kit LTK



Features and Benefits

- Special tank-mounted filter kit
- Includes: cap assembly, weld ring assembly, element and bushing
- Available with standard 18L sized element
- Bypass valve in cap assembly

Model No. of filter in photograph is LTK-18LZ3.



Applications	for Tank- Mounted Filters
	PAF1
	MAF1
	MF2
	TF1
	KF3
	LF1—2"
	MLF1
	SRLT
	RLT
	KF8
Filter Housing	K9
Specifications	2K9
	3K9
	QF15
	QLF15

KTK LTK

150 gpm 570 L/min

100 psi 7 *bar*

Flow Rating:	Up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids	Filter	
Max. Operating Pressure:	100 psi (7 bar) exclusive of tank design	Housing	
Min. Yield Pressure:	Contact factory	Specifications	
Rated Fatigue Pressure:	Contact factory		
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		
Bypass Setting:	Cracking: 25 psi (1.7 bar)		Q
	Full Flow: 47 psi (3.2 bar)		
Porting Cap: Wold Ping:	Die Cast Aluminum		SCOL
weid King.	Steel		SSQL
Element Change Clearance:	17.0" (435 mm)		

LTK Tank-Mounted Filter Kit



Element Performance	Element	$\begin{array}{l lllllllllllllllllllllllllllllllllll$			Filtration Ratio wrt ISO 16889Using APC calibrated per ISO 11171 $\beta_x(c) \ge 200$ $\beta_x(c) \ge 1000$	
mormation	18L3	6.8	7.5	10.0	N/A	N/A
	18L10	15.5	16.2	18.0	N/A	N/A
	18LZ1	<1.0	<1.0	<1.0	<4.0	4.2
	18LZ3	<1.0	<1.0	<2.0	<4.0	4.8
	18LZ5	2.5	3.0	4.0	4.8	6.3
	18LZ10	7.4	8.2	10.0	8.0	10.0
	18LZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	
Capacity	18L3	110	
	18L10	88	
	18LZ1	200	
	18LZ3	205	
	18LZ5	228	
	18LZ10	203	
	18LZ25	184	
	Elemer Element No	nt Collapse Rating: Flow Direction: minal Dimensions:	150 psid (10 bar) Outside In 4.0" (100 mm) O.D. x 18.5" (470 mm) long

Tank-Mounted Filter Kit LTK

	Type Fluid	Appropriate Schroeder Media	Fluid	ST
	Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	SKB
	High Water Content	All Z (synthetic) media		Housings
	Invert Emulsions	10 and 25 μ Z (synthetic) media		МТА
	Water Glycols	3, 5, 10 and 25 μ Z (synthetic) media		
	Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation and 3 and 10 μ E (cellulose) media with H (EPR) seal designation		MTB
l	Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and		ZT
		stainless steel wire mesh in element, and light oil coating on housing exterior)		КТ

Notes

Skydrol is a registered trademark of Solutia Inc.

MT/
MT
Z
K
R
RT
KF
LR
BF
Q

KTK

LTK

∆ P element		Pressure	for Tan Mounte Filte
$\Delta P_{element} = flow$	x element ΔP factor x viscosity factor	Drop	
El. ΔP factors	@ 150 SUS (32 cSt):	Information	PAI
	18L	Based on	MA
18LZ1	.10	FIOW Rate	
18LZ3	.05	and viscosity	M
181 710	.04		т
18LZ25	.02		
f working in ur by 54.9.	nits of bars & L/min, divide above factor		K
/iscosity factor	: Divide viscosity by 150 SUS (32 cSt).		LF1—
			ML
			SR
			K
			2
			3
			QF
		-	QLF
		-	SSQLF
			QFI

LTK Tank-Mounted Filter Kit



Dirt Alarm [®] Options				
	Omit = None			
Visual	Y2C = Bottom-mounted gauge in cap			

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. *Example*: 18LZ3H
- Box 4. For options H and W, cap is anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Skydrol is a registered trademark of Solutia Inc.

Accessories for Tank-Mounted Filters



The mounting ring is welded directly to the hydraulic reservoir. The filter is then mounted to the mounting ring with bolts converting the filter to a "weld in" design. The mounting ring eliminates the need to drill and tap the hydraulic reservoir.

Model Number	Part Number	А	В	с
ST, RT, RTI, LRT	A-LFT-813	7.00 (178)	5.00 (127)	1.00 (25)
ST, RT, RTI, LRT High Version	A-LFT-1448	7.00 (178)	5.00 (127)	1.50 (38)
ZT	A-LFT-1295	6.25 (159)	3.62 (92)	.88 (22)

The diffuser option (designated as D for outlet porting option in model number) is threaded to the bushing on the filter bowl below the outlet opening to help decrease turbulent flow in the hydraulic reservoir.

No other outlet port options are available if the diffuser is used.

Model Number	Part Number	NPTF
rt, kft	A-LFT-1506	11⁄2"
LRT	A-LFT-1507	2"





The check valve option (designated as C for outlet porting option in model number) makes it possible to service the filter without draining the oil from the reservoir when the filter is mounted below the oil level. It also prevents reservoir siphoning when system components are serviced.

The check valve can also be used on other reservoir return flow lines, where components upstream of the check valve can be serviced without the loss of reservoir oil. The spring setting is .75-1.00 psi cracking. Order by part number shown in chart.

No other outlet port options are available if the check valve is used.

Model Number	Part Number	NPTF	А
ST, RT, KFT	A-LFT-158Q-1	1½"	2.34 (59)
LRT	A-LFT-880	2 "	2.34 (59)
BFT	A-BFT-103	3"	4.50 (114)

Mounting	ST
Ring for ST. ZT.	SKB Housings
RT, RTI and	MTA
LKI WODEIS	МТВ
	ZT
	KT
	RT
	RTI
	KFT
	LRT
Diffuser	BFT
for RT,	QT
LRT, and KET Models	КТК
KFT MOUEIS	LTK
	Accessories for Tank- Mounted Filters
	PAF1
	MAF1
	MF2
	TF1
Check Valve	KF3
LRT, BFT,	LF1—2"
and KFT Models	MLF1
	SRLT
	RLT
	KF8
	К9
	2K9
	3K9
	QF15
	QLF15
	SSQLF15

Accessories for Tank-Mounted Filters

Check Valve Diffuser Combination for RT and KFT Models The diffuser/check valve option (designated as CD for outlet porting option in model number) is threaded on to the outlet port and combines the advantages of both separate options in one assembly.

Available as a separate item with $1^{1}\!/_{2}"$ NPT female threads, order part number A-LFT-1208.

No other outlet port options are available if the check valve/diffuser is used.



Tube Adapter Outlet Port for RT, KFT, LRT and BFT Models The tube adapter outlet port option (designated as T for outlet porting option in model number) provides the means to direct flow to the bottom of the hydraulic reservoir. Other tube lengths are available for quantity purchases. Contact your Schroeder distributor for details.

Model Number	Dimension A (O.D.) in. (mm)
RT, KFT	1.62 (41)
LRT	2.25 (57)
BFT	3.50 (89)



Note: No other outet port options are available if the tube adapter is used.

Threaded Outlet Port for ZT, RT, LRT, BFT, and KFT Models The threaded male outlet port is standard on the RT, LRT, BFT, and KFT models, and is available as an option on the ZT filter by designating OP for the outlet porting options in the model number.

- RT is furnished with 1½" NPT Male (standard)
- LRT is furnished with 2" NPT Male (standard)
- BFT is furnished with 3" NPT Male (standard)
- ZT is furnished with 1½" NPT Male (optional)
- KFT is furnished with 1½" NPT Male (standard)

SAME DAY SHIPMENT MODEL AVAILABLE! Spin-On Filter PAF1

	 Features and Benefits Spin-On with full ported die cast aluminum head for minimal pressure drop Offered in pipe and SAE straight thread porting Spin-On thread = 1.00-12UNF-2B Visual gauge or electrical switch dirt alarms Small profile for use in limited space 	20 gpm <u>75 L/min</u> 100 psi 7 bar	ST SKB Housings MTA MTB ZT KT
1-800-722-4810 РЕЛО В, тосло 200 В, то 200	 Same day shipment model available 		RT RTI KFT LRT BFT QT KTK
Model No. of filter in photograph is Industrial Automotive MANUFACTURING Steel MAKING	<image/>	Applications	LTK Accessories for Tank- Mounted Filters PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT
Flow Rating: Max. Operating Pressure: Min. Yield Pressure: Rated Fatigue Pressure: Temp. Range: Bypass Setting: Porting Head & Cap:	Up to 20 gpm (75 L/min) for 150 SUS (32 cSt) fluids 100 psi (7 bar) 150 psi (10 bar) Contact factory -20°F to 225°F (-29°C to 107°C) Cracking: 30 psi (2 bar) Full Flow: 36 psi (2 bar) Die Cast Aluminum	Filter Housing Specifications	KF8 K9 2K9 3K9 QF15 QLF15
Element Case: Weight of PAF1-6P:	Steel 1.8 lbs. (0.8 kg)		SSQLF15

Element Change Clearance: 2.50" (65 mm)

PAF1 Spin-On Filter SAME DAY SHIPMENT MODEL AVAILABLE!



Metric dimensions in ().

Installation instructions included on element.

Element Performance		Filtration Ra	atio Per ISO 4572/I particle counter (APC) c	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171		
Information	Element	$\beta_x \ge 75$	$\beta_x \ge 100$	$\beta_x \ge 200$	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$
mormation	P10	15.5	16.2	18.0	N/A	N/A
	PZ10	7.4	8.2	10.0	8.0	10.0
	PZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	
Capacity	P10	37	
	PZ10	N/A	
	PZ25	N/A	
	Elemer	nt Collapse Rating: Flow Direction:	100 psid (7 bar) Outside In
	Element No	minal Dimensions:	3.75" (95 mm) O.D. x 5.5" (140 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE! Spin-On Filter PAF1

	Туј	pe Fluid	Appropriate Schroeder Media			Fluid	ST
Petrol	eum Base	d Fluids	10 μ E (cellulose) and 25 μ Z (synthetic) media			Compatibility	SKR
Hig	h Water (Content	25 μ Z (synthetic) media				Housings
	Invert En	nulsions	25 μ Z (synthetic) media				MTA
	Water	Glycols	25 μ Z (synthetic) media				MTR
							INTO
							ZT
	Flor	nent	Element selections are predica	ated on the use of 150 SU	IS (32 cSt)	Floment	KT
Pressure	Series	Part No.	petroleum based fluid and a	0 psi (2.1 bar) bypass val	ve.	Selection	RT
To 100 psi	E Media	P10		P10		Based on Flow Rate	RTI
(7 bar)	Z Media	PZ25		PZ25			KFT
		gpm () D	10	20		LRT
	Flow	(L/min) (0 25	50	75		BFT
Shown abo	ove are the	elements mo	st commonly used in this housing.				
Note: Con	tact facto	ry regarding	use of E Media in High Water C	ontent, Invert Emulsion ar	nd Water Glycol		QT
Applicatio	ons. For m	ore informa	tion, refer to Fluid Compatibility	: Fire Resistant Fluids, pag	es 19 and 20.		КТК
							LTK





S = SAE-12

Visual

Electrical



Y2 = Back-mounted tri-color gauge

ES = Electric switch

NOTE:

Box 2. Replacement element part numbers are a combination of Boxes 3 and 4. Example: P10

Spin-On Filter MAF1



Features and Benefits

- Spin-On with full ported die cast aluminum head for minimal pressure drop
- Offered in pipe, SAE straight thread and ISO 228 porting
- Spin-On thread = 1.50-16UN-2B
- Visual gauge or electrical switch dirt alarms
- Small profile for use in limited space
- Available in 7" and 10" element lengths
- Available with NPTF inlet and outlet fema test ports

Model No. of filter in photograph is MAF17M10S.





AUTOMOTIVE MANUFACTURING



MACHINE TOOL





STEEL MAKING

PAPER INDUSTRY



MOBILE VEHICLES

ale		
	Applications	

MAF1

50 gpm *190 L/min*

100 psi

7 bar



Flow Rating:	Up to 50 gpm (190 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	100 psi (7 bar)	Housing	KO
Min. Yield Pressure:	150 psi (10 bar)	Specifications	K9
Rated Fatigue Pressure:	Contact factory		2K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		3K9
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 48 psi (3 bar)		QF15
Porting Head & Cap: Element Case:	Die Cast Aluminum Steel		QLF15
Weight of MAF1-7M: Weight of MAF1-10M:	4.2 lbs. (1.9 kg) 5.0 lbs. (2.3 kg)		SSQLF15
Element Change Clearance:	2.50" (65 mm)		QFD5

MAF1 Spin-On Filter



SPIN-ON THREAD=1.50-16UN-2B

Installation instructions included on element.

Metric dimensions in ().

Element Performance	7" Element	Filtration R ation Using automated p $B_x \ge 75$	tio Per ISO 4572/I barticle counter (APC) ca $\beta_x \ge 100$	NFPA T3.10.8.8 librated per ISO 4402 $\beta_x \ge 200$	Filtration Ratio Using APC calibra $\beta_x(c) \ge 200$	o wrt ISO 16889 ted per ISO 11171 β _x (c) ≥ 1000
Information	M3 M10	6.8	7.5	10.0	N/A N/A	N/A N/A
	MZ3	<1.0	<1.0	<2.0	<4.0	4.8
	MZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding	7" Element	DHC (gm)	
Capacity	M3	50	
	M10	37	
	MZ3	105	
	MZ10	104	
	Element Non	: Collapse Rating: Flow Direction: ninal Dimensions:	100 psid (7 bar) Outside In 7M: 5.0" (125 mm) O.D. x 7.0" (180 mm) long 10M: 5.0" (125 mm) O.D. x 10.5" (261 mm) long

Spin-On Filter MAF1

	Туј	pe Fluid	Appropria	ate Schroed	er Media					Fluid	ST
Petrole	eum Base	d Fluids	All E (cellu	ll E (cellulose) and Z (synthetic) media						Compatibility	CVP
High Water Content		3 and 10 μ Z (synthetic) media							Housings		
	Invert En	nulsions	10 µ Z (syr	nthetic) medi	а						NATA
	Water	Glycols	10 µ Z (syr	nthetic) medi	a						IVITA
											MTB
											ZT
Proceuro	Elei	nent Part No	Element	selections a	are predicate	d on the us	e of 150	SUS (32 cS	it)	Element	KI
Tressure	E Media	M3	petroleu	M3 See RLT				RLT	Selection	RT	
То		M10			M1	0			See RLT	Based on Flow Rate	RTI
(7 bar)	Z	MZ3	MZ3 See RLT								
	Media	MZ10			MZ	10			See RLT		KFT
	Flow	gpm	0	10	20	30	4	0	50		LRT
	TIOW	(L/min)	0	50	10	0	150		190		DET
Shown abo	ve are the	elements mo	st commonly	y used in this	housing.						DET
Note: Con	tact facto	ry regarding	g use of E N	Aedia in Hig	h Water Con	tent, Invert	Emulsion	and Water	r Glycol		QT
Applicatio	, , , , , , , , , , , , , , , , , , ,		111011, 19191		πρατισπτις. Γι	Te Resistant	riulus, p	ayes 19 an	iu 20.		КТК
											LTK
										_	Accessories for Tank-



or

= [.08 + .54 = .62 bar]

SCHROEDER INDUSTRIES 191

MAF1 Spin-On Filter



NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. Replacement element part numbers for 7" length begin with M. Replacement element part numbers for 10" length begin with 10M. *Examples*: M3V; 10MZ3V 10" only available with MZ3 and MZ10.
- Box 4. For option V, all aluminum parts are anodized. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 5. B porting option supplied with metric mounting holes.

G-1¼"

Spin-On Filter MF2

	 Features and Benefits Spin-On with full ported cast iron head for minimal pressure drop Offered in pipe, SAE straight thread and ISO 228 porting Spin-On thread = 1.50-16UN-2B Various Dirt Alarm[®] options Available in 7" and 10" element lengths 	60 gpm <u>230 L/min</u> 150 psi 10 bar	ST SKB Housings MTA MTB ZT KT KT RTI KFT
Model No. of filter in photograph is	s MF27M10SD5.		LRT BFT QT KTK LTK Accessories for Tank-
INDUSTRIAL INDUSTRIAL AUTOMOTIVE MANUFACTURING AUTOMOTIVE MANUFACTURING AUTOMOTIVE MANUFACTURING AUTOMOTIVE MANUFACTURING PAPER INDUSTRY	Machine Mining F Machine Agriculture Mining Barris Mining <	Applications	Mounted Filters PAF1 MAF1 MF2 TF1 KF3 LF1—2"
Flow Rating:	Up to 60 gpm (230 L/min) for 150 SUS (32 cSt) fluids	Filter Housing	MLF1 SRLT RLT KF8
Min. Yield Pressure: Rated Fatigue Pressure: Temp. Range: Bypass Setting: Porting Head: Element Case:	250 psi (17 bar) Contact factory -20°F to 225°F (-29°C to 107°C) Cracking: 30 psi (2 bar) Full Flow: 48 psi (3 bar) Cast Iron Steel	Specifications	K9 2K9 3K9 QF15 QLF15
Weight of MF2-7M: Element Change Clearance:	8.6 lbs. (3.9 kg) 1.50" (40 mm)		SSQLF15 QFD5

MF2 Spin-On Filter



Metric dimensions in ().

Element Performance	7" Element	Filtration Ra Using automated p	article counter (APC) ca	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171 $\beta_{L}(x) > 200$ $\beta_{L}(x) > 1000$		
Information	M3	6.8	7 5	10.0	$D_{\mathbf{x}}(t) \ge \mathbf{\Sigma} \mathbf{U} \mathbf{U}$	N/Δ
	M10	15 5	16.2	18.0	N/A	N/A
	MZ3	<1.0	<1.0	<2.0	<4.0	4.8
	MZ10	7.4	8.2	10.0	8.0	10.0

Dirt Holding	7" Element	DHC (gm)	
Capacity	M3	50	
	M10	37	
	MZ3	105	
	MZ10	104	
	Element	Collapse Rating: Flow Direction: ninal Dimensions:	100 psid (7 bar) Outside In 7M: 5.0" (125 mm) O.D. x 7.0" (180 mm) long 10M: 5.0" (125 mm) O.D. x 10.5" (261 mm) long

Spin-On Filter MF2

Type Fluid Appropriate Schroeder Media							Fluid	ST		
Petroleum Based Fluids			All E (cellulose) and Z (synthetic) media						Compatibility	C// P
High Water Content		3 and 10 μ Z (synthetic) media					Housings			
	Invert E	mulsions	10 μ Z (synthetic) media							МТА
	Wate	r Glycols	10 µ Z (synthetic	c) media						MIA
										MTB
										ZT
Pressure	Ele Series	ment Part No.	Element select petroleum bas	tions are predicat sed fluid and a 30	ted on the use 0 psi (2.1 bar)	e of 150 s bypass v	SUS (32 cSt alve.	:)	Element	КТ
	E	7M3	7M3 See RLT					Based on	RT	
To 150 psi	Media	7M10		7M10			See RLT		Flow Rate	RTI
(10 bar)	Z	7MZ3	7MZ3			See RLT				
	Iviedia	7MZ10	7MZ10				See RLT			KFT
	Flow	gpm (20	30	40	5	50			LRT
		(L/min) (0 50	100	150			230		DET
Shown ab	ove are the	e elements mo	ost commonly used	I in this housing.						DEI
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.										QT
									КТК	
										LTK







NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. Replacement element part numbers for 7" length begin with M. Replacement element part numbers for 10" length begin with 10M. Example: M3; 10MZ3 10" only available with MZ3 and MZ10.
- Box 4. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 5. B porting option supplied with metric mounting holes.

Visual

Electrical

Visual

with

Thermal Lockout

(male end)

MS13DCLCT = Low current MS13DCT

MS14DCLCT = Low current MS14DCT

MS13DCT = MS13 (see above), direct current, w/ thermal lockout

MS14DCT = MS14 (see above), direct current, w/ thermal lockout
Return Line Filter TF1

	 Features and Benefits Offered in pipe, SAE straight thread, flange and ISO 228 porting Various Dirt Alarm® options Available with No-Element indicator Available with NPTF inlet and outlet female test ports Available with magnet inserts Available with housing drain plug 	30 gpm <u>120 L/min</u> 300 psi 20 bar	ST SKB Housings MTA MTB ZT KT RTI KFT LRT
			BFT QT KTK
Model No. of filter in photograph i	s TF11AZ10SD5.		LTK
		Applications	Accessories for Tank- Mounted Filters
			PAF1
INDUSTRIAL AUTOMOTIVE	PAPER AGRICULTURE MOBILE		MAF1
MANOFACTORING	INDUSTRY VEHICLES		MF2
			TF1
			KF3
			LF1—2"
			MI F1
			CRIT
		-	DIT
Flow Poting	Up to 20 gpm $(120 \downarrow min)$ for 150 SUS (22 eSt) fluids	Filter	
Max. Operating Pressure:	300 psi (20 bar)	Housing	КГО
Min. Yield Pressure:	1200 psi (80 bar)	Specifications	К9
Rated Fatigue Pressure:	270 psi (19 bar), per NFPA T2.6.1-2005		2K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		ЗК9
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 51 psi (4 bar)		QF15
Porting Head: Element Case:	Cast Aluminum Steel		QLF15
Weight of TF1-1A: Weight of TF1-2A:	5.1 lbs. (2.3 kg) 6.3 lbs. (2.9 kg)		SSQLF15
Element Change Clearance:	3.50" (90 mm)		QFD5

TF1 Return Line Filter



Return Line Filter **TF1**

	Ty	pe Fluid	Appropriate Schroed	er Media					Fluid	ST
Petrole	Petroleum Based Fluids All E (cellulose) and Z (synthetic) media								Compatibility	SKB
Hig	h Water (Content	All Z (synthetic) media							Housings
	Invert En	nulsions	10 and 25 μ Z (syntheti	c) media			MTA			
	Water	Glycols	3, 5, 10 and 25 µ Z (sy	nthetic) me	dia					
	Phosphat	e Esters	All Z (synthetic) media	with H (EPF	R) seal de	signation		_		MTB
	9	Skydrol®	3, 5, 10 and 25 µ Z (syn stainless steel wire mes	nthetic) me h in elemer	dia with I nt_and lic	H.5 seal desi aht oil coatir	gnation (EPR : g on housing	seals and exterior)		ZT
					-,		.gg		trademark of Solutia Inc.	КТ
										DT
Pressure	Elei Series	ment Part No.	Element selections	are predic	ated on 30 psi (2	the use of	150 SUS (32 ass valve.	cSt)	Element	KI
		A3	1A3			2A3			Selection	RTI
	E Media	A10	1A1	0			2A10		Flow Rate	KFT
То		A25	10.71		1A25	2	۸71			107
300 psi (20 bar)	7	AZ1 AZ3	1AZ	3		2	2AZ3			LRI
(20 bul)	Z Media	AZ5			AZ5					BFT
		AZ10			AZ10					ОТ
		apm	0	10	ALZJ	20		30		
	Flow	(L/min)	0 25	50		75	100	120		KTK
Shown abo	ove are the	elements me	ost commonly used in thi	s housing.						LTK
Note: Con Applicatio	itact facto ons. For m	ry regardin ore inform	g use of E Media in Hi ation, refer to Fluid Co	gh Water (mpatibility	Content, y: Fire Re	Invert Emul esistant Flui	lsion and Wat ds, pages 19 d	ter Glycol and 20.	Pressure	Accessories for Tank- Mounted Filters
TE1 AD	f fl :	م منه ما فانتخاب			= flow x (element AP 1	actor x viscosi	ty factor	Drop	PAF1
IFI $\Delta \mathbf{P}_{hous}$	sing TOP TIUI	Flow (L/min)	Jr = 0.86:	$El. \Delta P fa$	ctors @ 1	50 SUS (32 d	:St):		Information	MACI
10	(25)	(50) (75	i) (100)			1A	2A		Based on	IVIAT I
8				A3		.53	.27		and Viscosity	MF2
 -			(0.50)	A10 A25		.36 .05	.18 .03			TF1
P psi			(bar	AZ1		.70	.35			KES
4 4			(0.25)	AZ5 AZ5		.32	.16			KI J
2				AZ10 AZ25		.25 .14	.13 .07			LF1—2"
م ل		0 2	0 30	If workin	g in units	of bars & L/n	nin, divide abov	ve factor		MLF1
	cific analit	Flow gpm		by 54.9. Viscosity	factor: Di	vide viscosity k	oy 150 SUS (32 cS	it).		SRLT
sp gr = spe		y 				-				RLT
Sizing of el	lements sh	ould be base	d on element flow inforr	nation prov	ided in th	ie Element Se	election chart a	above.		VEQ
Notes				$\Delta \mathbf{P}_{filter}$ =	= $\Delta \mathbf{P}_{housi}$	ng + $\Delta \mathbf{P}_{elem}$	ent			KI O
notes				Exercise:						K9
				Determ TF12AZ	ine ∆P at 3PD usin	t 20 gpm (7 g 200 SUS (5 L/min) for 44 cSt) fluid.			2K9
				Solutio	n:					3K9
				ΔP_{housin}	_g = 4.5 p	osi [.30 bar]				QF15
				ΔP_{elemer}	_{nt} = 20 x	.25 x (200÷	-150) = 6.7 p	si		OI F15
					or = [75 -	x (.25÷54 9) x (44÷32) –	.47 barl		QLI 13
				ΔPtotol	= 4.5 -	+ 6.7 = 11.2	psi			SSQLF15
				iotai	or		h a rl			QFD5
					= [.30	+ .4/ = .//	uarj			

TF1 Return Line Filter

Filter Model Number Selection	Bow to build a valid ividder Number for a Schroeder IF1: BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 TF1 - - - - - - - - Example: NOTE: Only box 7 may contain more than one option BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 TF1 1 A 3 D D TE11A2DD5									
	BOX 1	BOX 2								
	Filter	Number of		Element Part Number	Optional					
	TF1	1 2	A Length A3 A10 A25 AZ1 AZ3 AZ5 AZ10 AZ25 AM10 AM25	 = 3 μ E media (cellulose) = 10 μ E media (cellulose) = 25 μ E media (cellulose) = 1 μ Excellement® media (synthetic) = 3 μ Excellement media (synthetic) = 5 μ Excellement media (synthetic) = 10 μ Excellement media (synthetic) = 25 μ Excellement media (synthetic) = 10 μ M media (reusable metal) = 25 μ M media (reusable metal) 	Omit = Buna N H = EPR V = Viton® H.5 = Skydrol® compatibility					
			7.1123							
	BOX 5			BOX 6	BOX 7					
	Options		Omit	Dirt Alarm® Options	Options					
	P = 1" NPTF	Marial	D	e = Pointer	Omit = None					
	S = SAE-16 B = ISO 228 G-1"	Visual Visual with Thermal	D5 D8	NPTF inlet and outlet female test ports						
		Electrical	M55LC M510LC M510LC M511LC M512LC M515DCNC M515DCNC M516LC M516LC M517LC	 Electrical w/ 12 in. 18 gauge 4-conductor cable Low current MS5 Electrical w/ DIN connector (male end only) Low current MS10 Electrical w/ 12 ft. 4-conductor wire Electrical w/ 5 pin Brad Harrison connector (male end only) Low current MS12 Electrical, direct current normally open, for DC use only Electrical, direct current normally closed, for DC use only Electrical w/ weather-packed sealed connector Low current MS16 Electrical w/ 4 pin Brad Harrison male connector 	N = No-Element indicator G440 = ½" drain on bottom of housing M = Magnet inserts					
cement element part ers are identical to nts of Boxes 3 and 4. lia elements are only ble with Buna N seals.		Electrical with Thermal Lockout	MS5T MS5LCT MS10LT MS10LCT MS12LCT MS16T MS16LCT MS16LCT	 = MS5 (see above) w/ thermal lockout = Low current MS5T = MS10 (see above) w/ thermal lockout = Low current MS10T = MS12 (see above) w/ thermal lockout = Low current MS12T = MS16 (see above) w/ thermal lockout = Low current MS16T = Low current MS16T = Low current MS17T 						
otion V, all aluminum are anodized. al designation includes illowing: EPR seals, ess steel wire mesh ements, and light oil ag on housing exterior.		Electrical Visual	MS MS2 MS13 MS14	 Given a constraint of the second se						
is a registered mark of DuPont Dow mers. Ol is a registered trade- of Solutia Inc. ting option supplied netric mounting holes.		Electrical Visual with Thermal Lockout	MS13DCT MS13DCLCT MS14DCT MS14DCLCT	 = MS13 (see above), direct current, w/ thermal lockout = Low current MS13DCT = MS14 (see above), direct current, w/ thermal lockout = Low current MS14DCT 						

- Box 3. Replac numb conter E medi availa
- Box 4. For opparts a parts a H.5 sea the fol stainles on ele coatin Viton traden Elasto Skydro mark
- Box 5. B port with n

SAME DAY SHIPMENT MODEL AVAILABLE! Return Line Filter KF3



Features and Benefits

- Meets HF4 automotive standard
- Offered in pipe, SAE straight thread, flange and ISO 228 porting
- Various Dirt Alarm[®] options
- Available with No-Element indicator
- Available with NPTF inlet and outlet female test ports
- Available with magnet inserts
- Available with housing drain plug
- Takes the standard "K" element in K, KK or 27K lengths
- Same day shipment model available
- Allows consolidation of inventoried replacement elements by using K-size elements
- WKF3 model for water service available refer to Section 5 of this catalog
- Also available with DirtCatcher[®] elements (KD & KKD)

100 gpm 380 L/min	SK Housing
300 psi	МТ
20 bar	MT
	Z
	K
	F
	R
	KI
	LF
	BF
	Q

Applications

KTK

Model No. of filter in photograph is KF31K10S.





AUTOMOTIVE MANUFACTURING







STEEL MAKING



PAF
MAF
MF
TF
KF
LF1—2

N	/		

RL

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter KF8	
Max. Operating Pressure:	300 psi (20 bar)	Housing	
Min. Yield Pressure:	1000 psi (70 bar)	Specifications	
Rated Fatigue Pressure:	290 psi (20 bar), per NFPA T2.6.1-2005	2K9	
Temp. Range:	-20°F to 225°F (-29°C to 107°C)	3K9	
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 51 psi (4 bar)	QF15	
Porting Head: Element Case:	Die Cast Aluminum Steel	QLF15	
Weight of KF3-1K: Weight of KF3-2K: Weight of KF3-3K:	10.5 lbs. (4.8 kg) 14.2 lbs. (6.4 kg) 18.5 lbs. (8.4 kg)	SSQLF15 OFD5	
Element Change Clearance:	1.50" (40 mm) for all lengths		

KF3 Return Line Filter SAME DAY SHIPMENT MODEL AVAILABLE!



Metric dimensions in ().

Element Performance	Element	Filtration Rates Using automated $\beta_x \ge 75$	atio Per ISO 4572/ I particle counter (APC) c $\beta_x \ge 100$	$\begin{array}{l} \mbox{Filtration Ratio wrt ISO 16889} \\ \mbox{Using APC calibrated per ISO 11171} \\ \mbox{$\beta_x(c) \geq 200$} \\ \mbox{$\beta_x(c) \geq 1000$} \end{array}$			
information	К3	6.8	7.5	10.0	N/A	N/A	
	К10	15.5	16.2	18.0	N/A	N/A	
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2	
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8	
	KZ5	2.5	3.0	4.0	4.8	6.3	
	KZ10	7.4	8.2	10.0	8.0	10.0	
	KZ25	18.0	20.0	22.5	19.0	24.0	

Dirt Holding	
Capacity	

ding 🛛	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
acity	К3	54	ККЗ	108	27K3	162	-	-	-	-
	K10	44	KK10	88	27K10	132	-	-	-	-
	KZ1	112	KKZ1	224	27KZ1	336	KDZ1	89	KKDZ1	188
	KZ3	115	KKZ3	230	27KZ3	345	KDZ3	71	KKDZ3	150
	KZ5	119	KKZ5	238	27KZ5	357	KDZ5	100	KKDZ5	210
	KZ10	108	KKZ10	216	27KZ10	324	KDZ10	80	KKDZ10	168
	KZ25	93	KKZ25	186	27KZ25	279	KDZ25	81	KKDZ25	171
	Eler	150 psid Outside I	psid (10 bar) for standard elements side In							

Element Nominal Dimensions: K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE! Return Line Filter KF3

	Ty	pe Fluid	Appropriate Schroed	er Media						Fluid	ST
Petrole	Petroleum Based Fluids All E (cellulose) and Z (synthetic) media									Compatibility	SKB
Hig	h Water (Content	All Z (synthetic) media								Housings
	Invert En	nulsions	10 and 25 μ Z (synthet	ic) media							MTA
_	Water	Glycols	3, 5, 10 and 25 µ Z (sy	nthetic) me	dia						1470
	Phosphat	e Esters	All Z (synthetic) media E (cellulose) media with	with H (EPI n H (EPR) se	R) seal desigr al designatio	nation and 3 n	3 and	10 µ			IVI I B
	9	skydrol®	3, 5, 10 and 25 μ Z (sy	nthetic) me	dia with H.5	seal design	ation	and W (water		ZT
			removal) media with H	.5 seal desig	gnation (EPR	seals and st	tainle:	ss steel w	vire		KT
			mesh in clement, and i			ing exterior,	/			trademark of Solutia Inc.	RT
Pressure	Eler Series	ment Part No.	Element selections a	are predica	ted on the 0 psi (2.1 ba	use of 150 ar) bypass	SUS valve	(32 cSt)		Element	RTI
		K3	1K3		2K3†			3K3		Selection	
	E Media	K10	1K10	·	21	<10 [†]		3K10†		Flow Rate	KFI
То		K25		1K25				2K25†			LRT
300 psi		KZ1	1KZ1	11/70		2KZ1†		3KZ1†			RFT
(20 bar)	Z	KZ5		1KZ3	75		2	2K7	t		
	Media	KZ10		1	KZ10						QT
		KZ25		1	KZ25						КТК
	Flow	gpm	0 20	40	60	8	30	1	00		ІТК
	11000	(L/min)	0 50	150		250		3	80		LIK
Shown abo Note: Con Applicatio	ive are the tact facto ons. For m	elements mo ory regarding ore informa	st commonly used in this g use of E Media in Hig tion, refer to Fluid Co	housing. Ih Water Co mpatibility.	ontent, Inve Fire Resista	rt Emulsion nt Fluids, p	n and bages	Water G 5 19 and	ilycol 20.	Due en un	for Tank- Mounted Filters PAF1
Δ P _{housing}				$\Delta \mathbf{P}_{element}$						Pressure	
KF3 ΔP_{hous}	_{sing} for flui	ids with sp g	r = 0.86:	$\frac{\Delta P_{element}}{51 + P_{element}} =$	flow x elem	ent ΔP facto	or x vi	scosity fa	ctor	Information	MAF1
	(50) (Flow (L/min) 150) (250) (350)	EI. ΔP Tac	tors @ 150 S	US (32 CST):				Based on	MF2
°[.			(0.50)	K3	<u>1K</u> <u>2K</u> 25 12	<u>3K</u> 08		<u>1K</u>	<u>2K</u>	Flow Rate	TF1
6	+ -			K10	.09 .05	.03				and Viscosity	
.is 4			bar)	KZ5 KZ1	.02 .01	.01 .05 K	(DZ1	.24	.12		KF3
₫ .			(0.25) d	KZ3 KZ5	.10 .05 .08 .04	.03 K .02 K	(DZ3 (DZ5	.12 .1	.06 .05		LF1—2"
2				KZ10	.05 .03	.02 K	(DZ1	0 .06	.03		MI 51
ول				K225	.04 .02	.01 N		5 .04	.02		
0	20	Flow gpm	80 100	by 54.9.		ars & L/min, c		above tac	tor		SRLT
sp gr = spe	cific gravit	у		VISCOSITY T		iscosity by 150		(32 CST).			RLT
Sizing of el	ements sh	ould be based	on element flow inform	A D.	AD	Ment Selecti	ion ch	hart above	2.		KF8
Notes				$\frac{\Delta \Gamma_{\text{filter}}}{E_{\text{version}}} = \frac{1}{2}$	∆Fhousing +	∆ F element			_		К9
				Determi	he ΔP at 60	gpm (225 L	/min) for			2K9
				Colution		00 505 (44	(51)	nuid.			3K9
				Solution	- 3 5 psi [74 barl					51(5
				housing	= 5.5 psi [.						QF15
				$\Delta P_{element}$	= 60 x .04 or	x (200÷150)) = 3	.2 psi			QLF15
					= [225 x (.()4÷54.9) x	(44÷	32) = .23	bar]		SSQLF15
				ΔP_{total}	= 3.5 + 3.2	= 6.7 psi					OFD5
					= [.24 + .23	8 = .47 bar]]				
										-	





NOTES:

- Box 2. Double and triple stacking of K-size elements can be replaced by single KK and 27K elements, respectively. Number of elements must equal 1 when using KK or 27K elements.
- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4.
- Box 4. For options H, W, V, and H.5, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton is a registered trademark of DuPont Dow Elastomers. Skydrol is a registered trademark of Solutia Inc.
- Box 5. For option F, bolt thread depth .63" (16 mm). B porting option supplied with metric mounting holes.
- Box 7. Option L not available with MS & MS2 dirt alarm options.

Return Line Filter With 2" Ports LF1

Model No. of filter in photograph is	 Peatures and Benefits Offered in pipe, SAE straight thread and ISO 228 porting Available in 18" element lengths only Various Dirt Alarm® options Available with NPTF inlet and outlet female test ports Available with 2" porting with "K" size element Available with housing drain plug WLF1 model for water service also available – refer to Section 5 of this catalog 	gpm L/minSTSKB HousingspsiMTAMTBZTKTRTIRT
AUTOMOTIVE MANUFACTURING ACHINE	Image: Descent result Image: Descent result Image: Descent result Image: Descent result <th>Accessories for Tank- Mounted Filters PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT</th>	Accessories for Tank- Mounted Filters PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT
Flow Rating: Max. Operating Pressure: Min. Yield Pressure: Rated Fatigue Pressure: Temp. Range: Bypass Setting: Porting Head: Element Case: Available Porting: Weight of LF1-18LC: Element Change Clearance:	Up to 120 gpm (455 L/min) for 150 SUS (32 cSt) fluids Filter Housing 300 psi (20 bar) Particular State 1000 psi (70 bar) Particular State 250 psi (17 bar), per NFPA T2.6.1-2005 Particular State -20°F to 225°F (-29°C to 107°C) Particular State Cracking: 30 psi (2.1 bar) Particular State Full Flow: 60 psi (4.1 bar) Particular State 2" NPTF, 2½-12 SAE Straight Particular State 17.5 lbs. (7.9 kg) Particular State 2.0" (55 mm) Particular State	KER NG Tications KF8 K9 2K9 3K9 QF15 QLF15 SSQLF15 QFD5

LF1 Return Line Filter With 2" Ports



Metric dimensions in ().

Element Performance	Element	Filtration Ra Using automated	wrt ISO 16889 ted per ISO 11171			
Information	191 C2	6 9	7 5	10.0	$D_{\mathbf{x}}(t) \ge 200$	N/A
	IOLCS	0.0	7.5	10.0	IVA	N/A
	18LC10	15.5	16.2	18.0	N/A	N/A
	18LCZ1	<1.0	<1.0	<1.0	<4.0	4.2
	18LCZ3	<1.0	<1.0	<2.0	<4.0	4.8
	18LCZ5	2.5	3.0	4.0	4.8	6.3
	18LCZ10	7.4	8.2	10.0	8.0	10.0
	18LCZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding
Capacity

lg 📃	Element	DHC (gm)	
ty	18LC3	110	
	18LC10	88	
	18LCZ1	200	
	18LCZ3	205	
	18LCZ5	228	
	18LCZ10	203	
	18LCZ25	184	
	Elemen Element Noi	nt Collapse Rating: Flow Direction: minal Dimensions:	150 psid (10 bar) Outside In 4.0" (100 mm) O.D. x 18.5" (470 mm) long

Return Line Filter With 2" Ports LF1

Type Fluid	Appropriate Schroeder Media	Fluid	ST
Petroleum Based Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	SKR
High Water Content	All Z (synthetic) media		Housings
Invert Emulsions	10 and 25 μ Z (synthetic) media		МТА
Water Glycols	3, 5, 10 and 25 μ Z (synthetic) media		
Phosphate Esters	All Z (synthetic) media with H (EPR) seal designation		MTE
Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)	Skydrol is a registered trademark of Solutia Inc.	ZT

Pressure	Eleı Series	ment Part No.	Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 30 psi (2.1 bar) bypass valve.						Element		
		18LCZ1	18LCZ1						Based on		
To 300 psi (20 bar)		18LCZ3		18LCZ3					Elow Rate		
	Z Media	18LCZ5		18LCZ5							
	Wiedla	Ivicula	meana	18LCZ10		18LCZ10					
		18LCZ25		18LCZ25							
	Flow	gpm	0 6	0	80	100	120)			
	TIOW	(L/min)	0 2	30	300	380	455				

Shown above are the elements most commonly used in this housing.

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.



LF1 Return Line Filter With 2" Ports

Filter	How to Build a V	alid Model I	Number for a Schroeder LF1:						
Model	BOX 1 BOX 2	1							
Number									
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7									
	LF1 - 18 - LC3 - P32 - D5 - = LF118L								
	BOX 1 BC)X 2	BOX 3	BOX 4					
	Filter Leng Series Elem	gth of ent (in)	Element Size and Media	Seal Material					
	LF1	18	LC3 = LC size 3 μ E media (cellulose)	Omit = Buna N					
		L	C10 = LC size 10 μ E media (cellulose)	H = EPR					
		L	$CZ1 = LC size 1 \mu Excellement® Z media (synthetic)$	V = Viton®					
			$CZ5 = LC size 5 \mu$ Excellement 2 media (synthetic) $CZ5 = LC size 5 \mu$ Excellement 2 media (synthetic)	H.5 = Skydrol [®] compatibility					
		LC	$Z10 = LC$ size 10 μ Excellement Z media (synthetic)						
			$225 = LC size 25 \mu$ Excellement 2 media (synthetic)						
	BOX 5		BOX 6	BOX 7					
	Porting		Dirt Alarm [®] Options	Additional Options					
	P32 = 2" NPTF		Omit = None	Omit = None					
	S32 = SAE-32	Visual	D = Pointer D5 = Visual pop-up	L = Two ¼" NPTF inlet and outlet					
	B32 = ISO 228 G-2"	Visual with Thermal Lockout	D8 = Visual w/ thermal lockout	female test ports G426 = ¾" drain on bottom of					
			MS5 = Electrical w/ 12 in. 18 gauge	housing					
			4-conductor cable MS5LC = Low current MS5	bottom of					
			MS10 = Electrical W/ DIN connector (male end only)	nousing					
			MS10LC = Low current MS10 MS11 = Electrical w/ 12 ft. 4-conductor wire						
		Electrical	connector (male end only)						
			MS12LC = Low current insiz MS15DC = Electrical, direct current normally open,						
			MS15DCNC = Electrical, direct current normally						
			MS16 = Electrical w/ weather-packed sealed						
			MS16LC = Low current MS16 MS17LC = Electrical w/ 4 pip Brad Harrison						
			male connector						
lement nart			MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T						
combination		Electrical with	MS10T = MS10 (see above) w/ thermal lockout MS10LCT = Low current MS10T						
3V		Thermal Lockout	MS12T = MS12 (see above) w/ thermal lockout MS12LCT = Low current MS12T						
V, and H.5, parts are			MS16T = MS16 (see above) w/ thermal lockout MS16LCT = Low current MS16T MS17LCT = Low current MS17T						
nation includes EPR seals,			MS = Cam operated switch w/ ½" conduit						
wire mesh on light oil		El a studio a l	MS2 = Cam operated switch w/ 10" pigtail						
using exterior. stered		Visual	MS13 = Supplied w/ threaded connector						
DuPont Dow			& light MS14 = Supplied w/ 5 pin Brad Harrison						
gistered trade- a Inc.			MS13DCT = MS13 (see above) direct current						
vailable with		Electrical Visual	w/ thermal lockout MS13DCLCT = Low current MS13DCT						
act factory.		with Thermal	MS14DCT = MS14 (see above), direct current, w/ thermal lockout						
on supplied ounting holes.		Lockout	MS14DCLCT = Low current MS14DCT						

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. *Example*: 18LC3V
- Box 4. For options H, V, and H.5, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton is a registered trademark of DuPont Dow Elastomers. Skydrol is a registered trademark of Solutia Inc.
- Box 5. 2" ports are available with K-size elements for up to 100 gpm. Contact factory. B porting option supplied with metric mounting holes

Top-Ported Return Line Filter MLF1

	 Features and Benefits Equipped with inlet and outlet manifolds Meets HF4 automotive standard Offered in pipe and flange porting Available in 2, 4 or 6 element configurations Various Dirt Alarm[®] options Available with NPTF inlet and outlet female test ports Available with housing drain plugs 	200 gpm 760 L/min 300 psi 20 bar	ST SKB Housings MTA MTB ZT KT RTI KFT LRT
			OT
			КТК
Model No. of filter in photograph is	5 MLF14K10PD.		LTK
		Applications	Accessories for Tank- Mounted Filters
			PAF1
AUTOMOTIVE MACHINE MANUFACTURING TOOL	MINING STEEL MOBILE TECHNOLOGY MAKING VEHICLES		MAF1
			MF2
			TF1
			KF3
			LF1—2"
			MLF1
			SRLT
			RLT
Flow Rating:	Up to 200 gpm (760 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	300 psi (20 bar)	Housing	К9
Min. Yield Pressure:	1000 psi (70 bar)	specifications	2K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		213
Bypass Setting:	Cracking: 25 psi (2 bar)		5K9
Porting Head:	Anodized Cast Aluminum		QF15
Element Case:	Steel		QLF15
Weight of MLF1-2K: Weight of MLF1-4K: Weight of MLF1-6K:	44.0 lbs. (20.0 kg) 50.0 lbs. (23.0 kg) 58.0 lbs. (26.0 kg)		SSQLF15 QFD5
Element Change Clearance:	2.0" (55 mm)		

MLF1 Top-Ported Return Line Filter



Metric dimensions in ().

Element Performance	Element	Filtration Rates Using automated $\beta_x \ge 75$	tio Per ISO 4572/N particle counter (APC) ca $\beta_x \ge 100$	IFPA T3.10.8.8 alibrated per ISO 4402 $\beta_x \ge 200$	Filtration Ratio Using APC calibra $\beta_x(c) \ge 200$	ted per ISO 16889 $\beta_x(c) \ge 1000$
Information	К3	6.8	7.5	10.0	N/A	N/A
	К10	15.5	16.2	18.0	N/A	N/A
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	2K3	108	4K3	216	6K3	324
	2K10	88	4K10	176	6K10	264
	2KZ1	224	4KZ1	448	6KZ1	672
	2KZ3	230	4KZ3	460	6KZ3	690
	2KZ5	238	4KZ5	476	6KZ5	714
	2KZ10	216	4KZ10	432	6KZ10	648
	2KZ25	186	4KZ25	372	6KZ25	558

Element Collapse Rating: Flow Direction: lement Nominal Dimensions:

Element Collapse Rating:150 psid (10 bar) for standard elementsFlow Direction:Outside In

Element Nominal Dimensions: K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long

27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

210 SCHROEDER INDUSTRIES

Top-Ported Return Line Filter MLF1

	Ту	pe Fluid	Appropriate Schroed	der Media				Fluid	ST
Petrol	eum Base	d Fluids	All E (cellulose) and Z	synthetic) media				Compatibility	SKB
Hig	h Water	Content	All Z (synthetic) media						Housings
	Invert En	nulsions	10 and 25 μ Z (synthe	tic) media					MTA
	Water	Glycols	3, 5, 10 and 25 μ Z (s	ynthetic) media					
	Phosphat	e Esters	All Z (synthetic) media E (cellulose) media wit	a with H (EPR) seal design h H (EPR) seal designatior	ation and 1	3 and 10 µ			MTB
	9	5kydrol®	3, 5, 10 and 25 μ Z (s	ynthetic) media with H.5	seal desig	nation and V	V (water		Ζ1
			removal) media with H mesh in element and	1.5 seal designation (EPR s light oil coating on housi	eals and s na exterio	stainless stee r)	l wire		KT
				ingine on coating on nousi	ig chierio	• /		Skydrol is a registered trademark of Solutia Inc.	RT
	Ele	ment	Element selections	are predicated on the u	use of 15) SUS (32 c	St)	Element	RTI
Pressure	Series	Part No.	petroleum based fl	uid and a 25 psi (1.7 ba	r) bypass	valve.		Selection	VET
	E	K3 K10		4K3 1K10		6K 10		Based on	KF I
	Media	K25		4K25		UKIU		Flow Rate	LRT
To 200 pci		KZ1	4KZ	1	6K2	Z1			BFT
(20 bar)	7	KZ3	2KZ3	3KZ3	4	KZ3			
	Media	KZ5	2KZ5	4KZ5		6KZ5			QT
		KZ10	2	KZ10		4KZ10			КТК
		NZ25	0 100	120 140 1	60	190	200		171/
	Flow	(L/min)	0 200 400		00	180	760		LIK
Shown abo Note: Cor Applicatio	ove are the ntact facto ons. For m	elements mo ory regarding ore informa	st commonly used in thi g use of E Media in Hi ation, refer to Fluid Co	s housing. gh Water Content, Inver ompatibility: Fire Resistan	t Emulsio nt Fluids,	n and Wate pages 19 ar	r Glycol nd 20.		for Tank- Mounted Filters
$\Delta \mathbf{P}_{housing}$				ΔP _{element}				Pressure	PAFI
$MLF1 \Delta P_h$	_{ousing} for fl	uids with sp	gr = 0.86:	$\Delta P_{\text{element}} = \text{flow x element}$	nt ∆P fact	or x viscosity	factor	Drop	MAF1
20	(200)	Flow (L/min) (400)	(600)	El. ΔP factors @ 150 SU	/S (32 cSt)	:		Based on	MF2
30			(2.00)	K3 .12	.06	.04		Flow Rate	
25			(1.50)	K10 .05	.02	.02		and Viscosity	TF1
· <u>s</u> 20			ar)	K25 .01	.01 05	.01 03			KF3
d√ ¹⁵				KZ3 .05	.03	.02			161 2"
10		- PORTEN	EMENT SIE	KZ5 .04	.02	.02			LF 1-2
5				KZ10 .03 KZ25 .02	.02 .01	.01			MLF1
0	40	80 120 Flow gpm	160 200	If working in units of ba by 54.9.	rs & L/min,	divide above	factor		SRLT
sp gr = spe	cific gravit	у		Viscosity factor: Divide vi	scosity by 1	50 SUS (32 cSt)			RLT
Sizing of e	lements sh	ould be based	d on element flow inforr	nation provided in the Eler	ment Selec	tion chart ab	ove.		KES
Notes				$\Delta \mathbf{P}_{\text{filter}} = \Delta \mathbf{P}_{\text{housing}} + \mathbf$	$\Delta \mathbf{P}_{element}$				KIO K9
				The ΔP housing curve	labeled "I	Element Sizir	ıg"		
				is the pressure drop be areas of the filter's byc	tween the	e inlet and o and should b	utlet De used		2K9
				for filter sizing. The "P	ort to Por	t" ΔP takes	into		3K9
				consideration the inlet	and outle	et manifolds. V bigber due	This		OF15
				these additional flow of	onstrictio	ns. Although	this		Qi D
				ΔP does not affect the	performa	nce of the fi	lter,		QLF15
				it should be considered	a for overa	an system de	sign.		SSQLF15
									OFDE
									QFU5

MLF1 Top-Ported Return Line Filter



NOTES:

- Box 2. Double and triple stacking of K-size elements can be replaced by KK and 27K elements, respectively. Number of elements must equal 2 when using KK or 27K elements.
- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4. K25 is not available with EPR seals.
- Box 4. For options H, V, and H.5, all aluminum parts are anodized.
 H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton is a registered trademark of DuPont Dow Elastomers.
 Skydrol is a registered trademark of Solutia Inc.

SAME DAY SHIPMENT MODEL AVAILABLE! Medium Pressure Filter SRLT

		25 gpm <u>100 L/min</u>	ST SKB Housings
	Features and Benefits	1400 psi	MTA
	Smaller, compact version of the RLT	100 bar	МТВ
	 Quick and easy cartridge element changeouts 		ZT
	Lightweight at 3 pounds		КТ
	 Offered in pipe, SAE straight thread and ISO 228 porting 		RT
	 Available with NPTF inlet and outlet female test ports 		RTI
	 Various Dirt Alarm[®] options 		KFT
	Same day shipment model available		LRT
			BFT
			QT
			КТК
Model No. of filter in photograph is	SRLT6RZ10S12D5.		LTK
		Applications	Accessories for Tank- Mounted Filters
			PAF1
INDUSTRIAL AUTOMOTIVE	MACHINE STEEL MOBILE		MAF1
MANUFACIORING	MAKING VEHICLES		MF2
			TF1
			KF3
			LF1—2"
			MLF1
			SRLT
			RLT
Flow Rating:	Up to 25 gpm (100 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	1400 psi (100 bar)	Housing	Kð
Min. Yield Pressure:	4000 psi (276 bar)	Specifications	К У
Rated Fatigue Pressure:	750 psi (52 bar) per NFPA T2.6.1-R1-2005		2K9
Iemp. Range: Bypass Setting:	-20°F to 225°F (-29°C to 10/°C)		3K9
bypass secting.	Full Flow: 55 psi (3.8 bar)		QF15
Porting Head: Element Case:	Aluminum Aluminum		QLF15
Weight of SRLT-6R:	3.0 lbs. (1.4 kg)		SSQLF15
Element Change Clearance:	2.75" (70 mm)		QFD5

SRLT Medium Pressure Filter SAME DAY SHIPMENT MODEL AVAILABLE!



Metric dimensions in ().

Element Performance	Element	Filtration Rates Using automated $\beta_x \ge 75$	tio Per ISO 4572/I particle counter (APC) c $\beta_x \ge 100$	NFPA T3.10.8.8 alibrated per ISO 4402 $\beta_x \ge 200$	Filtration Ratic Using APC calibra B _x (c) ≥ 200	ted per ISO 16889 $B_{x}(c) \ge 1000$
Information	6R3	6.8	7.5	10.0	N/A	N/A
	6R10	15.5	16.2	18.0	N/A	N/A
	6RZ1	<1.0	<1.0	<1.0	<4.0	4.2
	6RZ3	<1.0	<1.0	<2.0	<4.0	4.8
	6RZ5	2.5	3.0	4.0	4.8	6.3
	6RZ10	7.4	8.2	10.0	8.0	10.0
	6RZ25	18.0	20.0	22.5	19.0	24.0

Dirt	Holding	
(Capacity	

ding	Ele	ment	DHC (gm)	
acity	6R3	3	5	
-	6R	10	6	
	6R.	Z1	15	
	6R.	Z3	15	
	6R.	Z5	17	
	6R.	Z10	14	
	6R.	Z25	25	
	EI	Element ement Non	t Collapse Rating: Flow Direction: ninal Dimensions:	150 psid (10 bar) Outside In 2.0" (50 mm) O.D. x 6.0" (150 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE! Medium Pressure Filter SRLT

	Ty	pe Fluid	Appropriate Schroed	er Media				Fluid	ST
Petrole	eum Base	d Fluids	All E (cellulose) and Z (s	ynthetic) media				Compatibility	CVD
High Water Content All Z (synthetic) media									Housings
Invert Emulsions 10 and 25 µ Z (synthetic) media									LATA
Water Glycols 3, 5, 10 and 25 µ Z (synthetic) media								INIA	
	Phosphat	e Esters	All Z (synthetic) media	with H (EPR) seal	designation				MTB
	9	5kydrol®	3, 5, 10 and 25 μ Z (synstainless steel wire mes	nthetic) media wit h in element, and	h H.5 seal des light oil coati	signation (E ng on hous	PR seals and sing exterior)	Skydrol is a registered trademark of Solutia Inc.	ZT
									KT
Pressure	Ele Series	ment Part No.	Element selections	are predicated Juid and a 40 ps	on the use o i (2.8 bar) bv	f 150 SUS pass valve	(32 cSt)	Element	RT
	E	6R3	P	6R3	· (,,		See RLT	Selection	RTI
То	Media	6R10		6R10			See RLT	Based on Flow Rate	KFT
1400 psi		6RZ1	6RZ1	6072		See RLT			
(100 bar)	Z Madia	6RZ5		6RZ5			See RLT		LRT
	Ivieula	6RZ10		6RZ10			See RLT		BFT
		6RZ25		6RZ2	5				
	Flow	gpm	0 5	10	15	20	25		QI
		(L/min)	0 25	50		75	100		КТК
Shown abo	ve are the	elements m	ost commonly used in th	is housing.					LTK
Note: Con	tact facto	ory regardii	ng use of E Media in Hi	igh Water Conte	nt, Invert Em	ulsion and	Water Glycol		
$\Delta \mathbf{P}_{\text{housing}}$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			$\Delta \mathbf{P}_{element}$		nus, pages	19 unu 20.	Pressure	Accessories for Tank- Mounted
SRIT AD	for flu	uide with er	ar - 0.86	$\Delta P_{oloment} = flow$	v x element ∆P	factor x vi	scosity factor	Drop	Filters
Flow (L/min) (T)				El. ΔP factors @ 150 SUS (32 cSt):				Information	PAF1
14	(23)	(50)	(73) (93) (1.0)	602	45			Based on	MAF1
12			(0.75)	6R10	.45			and Viscosity	
10				6RZ1	1.11				MF2
8 jsi			(0.5) (in the second se	6RZ3 6RZ5	.55 50				TF1
_¶∆ 6				6RZ10	.46				VED
4			(0.25)	6RZ25	.14				KI J
2		++		If working in u	nits of bars & L	/min, divide	above factor		LF1—2"
0	5	10 15	20 25	Viscosity factor	: Divide viscosity	y by 150 SUS (32 cSt).		MLF1
sp gr = spe	cific gravit	Flow gpm y			-	-			CDIT
Sizina of el	ements sh	ould be bas	ed on element flow infor	mation provided in	n the Element	Selection ch	art above.		SKLI
<u> </u>									RLT
									KF8
Notes				$\Delta \mathbf{P}_{filter} = \Delta \mathbf{P}_{h}$	ousing + $\Delta \mathbf{P}_{eler}$	ment			
				Exercise:			f		K9
				SRLT6R3P12D	P at 15 gpm (5 using 200 S	57 L/min) 505 (44 cSt	tor) fluid.		2K9
				Colution	J				3K9
					0 nci [27 ha	rl			JRJ
				housing = 5					QF15
				$\Delta P_{element} = 1$	5 x .45 x (200 r)÷150) = 9	psi		QLF15
				= [!	57 x (.45÷54.9	9) x (44÷3	2) = .64 bar]		
				$\Delta P_{total} = 5$.0 + 9.0 = 14.	0 psi			55QEI 15

or

= [.37 + .64 = 1.01 bar]

SRLT Medium Pressure Filter SAME DAY SHIPMENT MODEL AVAILABLE!



MS14DCLCT = Low current MS14DCT

Box 5. B porting option supplied with metric mounting holes.

mark of Solutia Inc.

Skydrol is a registered trade-

NOTES:

SAME DAY SHIPMENT MODEL AVAILABLE!

Medium Pressure Filter **RLT**



Features and Benefits

- Durable, compact design
- Quick and easy cartridge element changeouts
- Available in 9" and 14" element lengths
- Lightweight at 8 pounds
- Offered in pipe, SAE straight thread, flange and ISO 228 porting
- Available with NPTF inlet and outlet female test ports
- WRLT model for water service also available refer to Section 5 of this catalog
- Various Dirt Alarm[®] options
- Same day shipment model available

Model No. of filter in photograph is RLT9VZ10P20D5.



STEEL

MAKING





MANUFACTURING

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AGRICULTURE

MINING TECHNOLOGY



MOBILE VEHICLES

70 gpm 265 L/min	Hous
800 psi <i>55 bar</i>	

Applications

RLT

			_
Flow Rating:	Up to 70 gpm (265 L/min) for 150 SUS (32 cSt) fluids for P20, S20, & B20 porting Up to 50 gpm (190 L/min) for 150 SUS (32 cSt) fluids for P16, S16, F16, F20 & B16 porting	Filter Housing Specifications	KF8 K9
Max. Operating Pressure:	800 psi (55 bar)	specifications	21/0
Min. Yield Pressure:	2400 psi (165 bar)		ZK9
Rated Fatigue Pressure:	415 psi (29 bar), per NFPA T2.6.1-R1-2005		3K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		OF15
Bypass Setting:	Cracking: 40 psi (2.8 bar) for all porting Full Flow: 57 psi (3.9 bar) for P20 & S20 porting Full Flow: 75 psi (5.2 bar) for P16, S16, F16 & F20 porting		QLF15
Porting Head: Element Case:	Aluminum Aluminum	S	SQLF15
Weight of RLT-9V: Weight of RLT-14V:	6.7 lbs. (3.0 kg) 8.0 lbs. (3.6 kg)		QFD5
Element Change Clearance:	9V & 14V: 2.75" (70 mm)		

RLT Medium Pressure Filter



Metric dimensions in ().

Element Performance	Element	Filtration Ra Using automated p $\beta_x \ge 75$	tio Per ISO 4572/NF article counter (APC) cali $\beta_x \ge 100$	Filtration Ratio wrt ISO 16889Using APC calibrated per ISO 11171 $\beta_x(c) \ge 200$ $\beta_x(c) \ge 1000$		
Information	9V3/14V3	6.8	7.5	10.0	N/A	N/A
	9V10/14V10	15.5	16.2	18.0	N/A	N/A
	9VZ1/14VZ1	<1.0	<1.0	<1.0	<4.0	4.2
	9VZ3/14VZ3	<1.0	<1.0	<2.0	<4.0	4.8
	9VZ5/14VZ5	2.5	3.0	4.0	4.8	6.3
	9VZ10/14VZ10	7.4	8.2	10.0	8.0	10.0
	9VZ25/14VZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holdi Capaci

Element	DHC (gm)	Element	DHC (gm)	
9V3	25	14V3	38	
9V10	12	14V10	25	
9VZ1	55	14VZ1	102	
9VZ3	57	14VZ3	105	
9VZ5	62	14VZ5	115	
9VZ10	52	14VZ10	104	
9VZ25	48	14VZ25	94	
Elem	ent Collapse Rating:	150 psid (10 bar)		

Flow Direction: Element Nominal Dimensions:

500 psid (34.5 bar) for hydrostatic high collapse (9V5Z10 element) version Outside In

9V: 3.0" (75 mm) O.D. x 9.5" (240 mm) long 14V: 3.0" (75 mm) O.D. x 14.5" (370 mm) long

SAME DAY SHIPMENT MODEL AVAILABLE! Medium Pressure Filter RLT

	Ţ	ype Fluid	Appr	opriate Schro	eder Meo	dia					Fluid	S
Petroleum Based Fluids All E (cellulose) and Z (sy				Z (synthet	ic) media					Compatibility	SK	
High Water Content All Z (synthetic) media										Housing		
Invert Emulsions 10 and 25 µ Z (synthetic) media								MT				
Water Glycols 3, 5, 10 and 25 μ Z (synthetic) media								10117				
Phosphate Esters All Z (synthetic) media with H (EPR) seal designation								MT				
		Skydrol®	3, 5, staipl	10 and 25 µ Z	(synthetic) media w	vith H.5 se	eal desig	gnation (EF	PR seals and	Skydrol is a registered	Z
			stanne	ess steel wile li		ennenn, ar	iu light of	Coating	y on nousi		trademark of Solutia Inc.	K
										_		
Pressure	El Series	ement Part No).	Element sele	ections an ased flui	re predic d and a	ated on 1 40 psi (2.	the use 8 bar)	of 150 Sl bypass va	JS (32 cSt) lve.	Element	R
	E Modia	9V3 & 14	/3	P	9V3			14	V3 C	ontact Factory	Selection	RT
		9V10 & 14	↓V10		9\	V10			14V10 C	Contact Factory	Flow Rate	VE
To 800 pci		9VZ1 & 14	4VZ1		9VZ1	0)/72		14VZ1	Cor	ntact Factory		Kľ
(55 bar)	Z	9VZ5 & 14	4VZ5			9VZ3 9VZ	5	-	14723	14VZ5		LR
	Ivieula	9VZ10 & 1	4VZ10			9VZ10	& 14VZ10)				RF
		9VZ25 &	14VZ25			9VZ25	& 14VZ25	;				DI
	Flow	gpm	() 10	20	30	40	50	60	70		Q
		(L/min)	() 50		100	150		200	270		KT
Shown abo	ove are th	e elements	most co	mmonly used in	this hous	ing.			requires si	ze 20 porting		
$\Delta \mathbf{P}_{housing}$					ΔΡε	element					Pressure	Accessorie for Tank Mounte Filter
$RLT\ \Delta \mathbf{P}_{hou}$	using for flu	uids with sp	o gr = 0.	.86:	ΔP_e	element = flo	ow x elem	ent ∆P f	actor x viso	cosity factor	Drop	ΡΔϜ
	(50)	Flow (L/m	in)	(250)	El.	ΔP factor.	rs @ 150 Sl	JS (32 c	St):	4.01	Based on	
			,	(250)	9V	3	32		14/3	19	Flow Rate	MAF
12					9V	10 .	24		14V10	.15	and Viscosity	MF
10					9V 9V	Z1 . Z3 .	34 21		14VZ1 14VZ3	.21 .17		
a dP g		TING	PORT	 (0.50)	9V	Z5.	13		14VZ5	.09		11
4		-1E16POR	SVLE 20	<	9V 9V	Z 10 . Z 25 .	06		14VZ25	.08		KF
2		SIL.		(0.25)	lf w	orking in	units of ba	ırs & L/m	iin, divide a	bove factor		LF1—2
0	10 20) 30 40 Flow ap	50 m	60 70	Dy : Viso	cosity fact	or: Divide v	iscosity b	v 150 SUS (3	2 cSt).		MLF
sp gr = spe	ecific grav	ity				,		,				CD 1
Sizing of e	lomonts s	hould be ba	sed on a	element flow in	formation	provided	in the Ele	mont Sc	lection cha	urt above		SKL
Sizing of c	incincinci s		sea on a		Ionnation	provided		ment se		and above.		RL
												KE
Notes					ΔΡ	$_{\text{filter}} = \Delta \mathbf{F}$	P _{housing} +	$\Delta \mathbf{P}_{eleme}$	ent			
110105					Exe	ercise:						K
					De RLT	Determine ∆P at 40 gpm (150 L/min) for RLT9VZ5S16D5 using 200 SUS (44 cSt) fluid.					2 K	

Solution:

$\Delta P_{\text{housing}}$	= 5.5 psi [.35 bar]	
$\Delta P_{element}$	= 40 x .13 x (200÷150) = 6.9 psi or = [150 x (.13÷54.9) x (44÷32) = .49 bar]	
ΔP_{total}	= 5.5 + 6.9 = 12.4 psi or = [.35 + .49 = .84 bar]	

RLT Medium Pressure Filter SAME DAY SHIPMENT MODEL AVAILABLE!



BOX 5	5 BOX 6					
Porting Options		Additional Options				
P16 = 1" NPTF		Omit = None	Omit = None			
P20 = 1¼" NPTF	Visual	D5 = Visual pop-up	L = Two ¼"			
S16 = SAE-16 S20 = SAE-20 E20 = 1 ¹ / ₄ " SAE	Visual with Thermal Lockout	D8 = Visual w/ thermal lockout	inlet and outlet female			
4-bolt flange Code 61 B16 = ISO 228 G-1" B20 = ISO 228 G-1¼"	Electrical	MS5 = Electrical w/ 12 in. 18 gauge 4-conductor cable MS5LC = Low current MS5 MS10 = Electrical w/ DIN connector (male end only) MS10LC = Low current MS10 MS11 = Electrical w/ 12 ft. 4-conductor wire MS12 = Electrical w/ 5 pin Brad Harrison connector (male end only) MS12LC = Low current MS12 MS15DC = Electrical, direct current normally open, for DC use only MS15DCNC = Electrical, direct current normally closed, for DC use only MS16 = Electrical w/ weather-packed sealed connector MS16LC = Low current MS16 MS17LC = Electrical w/ 4 pin Brad Harrison male connector	test ports			
	Electrical with Thermal Lockout	MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T MS10T = MS10 (see above) w/ thermal lockout MS10LCT = Low current MS10T MS12T = MS12 (see above) w/ thermal lockout MS12LCT = Low current MS12T MS16T = MS16 (see above) w/ thermal lockout MS16LCT = Low current MS16T MS17LCT = Low current MS17T				
	Electrical Visual	MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)				
	Electrical Visual with Thermal Lockout	MS13DCT = MS13 (see above), direct current, w/ thermal lockout MS13DCLCT = Low current MS13DCT MS14DCT = MS14 (see above), direct current, w/ thermal lockout MS14DCLCT = Low current MS14DCT				

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4. *Example*: 9VZ10V
- Box 3. E media elements are only available with Buna N seals. V5Z10 and V5Z25 are only available with RLTN 9".
- Box 4. For options H, V, and H.5, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton is a registered trademark of DuPont Dow Elastomers. Skydrol is a registered trademark of Solutia Inc.
- Box 5. B porting supplied with metric mounting holes.

Medium Pressure Filter KF8



KF8 Medium Pressure Filter



Metric dimensions in ().

Element Performance	Flowert	Filtration Ra	atio Per ISO 4572/I particle counter (APC) c	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171		
Information	Element	D _x ≥ 75	$b_x \ge 100$	$b_x \ge 200$	$D_{\chi}(c) \geq 200$	$D_{\chi}(c) \ge 1000$
internation	К3	6.8	7.5	10.0	N/A	N/A
	К10	15.5	16.2	18.0	N/A	N/A
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	
Capacity	К3	54	-	-	
	K10	44	-	-	
	KZ1	112	KDZ1	89	
	KZ3	115	KDZ3	71	
	KZ5	119	KDZ5	100	
	KZ10	108	KDZ10	80	
	KZ25	93	KDZ25	81	
	Eleme Element N	ent Collapse Rating: Flow Direction: ominal Dimensions:	150 psid (10 bar) fo 3000 psid (210 bar) 5000 psid (350 bar) Outside In 3.9" (99 mm) O.D.	or standard elements) for high collapse (ZX)) for high collapse (M> x 9.0" (230 mm) long) elements (X) elements

Medium Pressure Filter KF8

	Ту	pe Fluid	Appropriate Schroeder Media	Fluid	ST
Petrole	eum Base	d Fluids	All E (cellulose) and Z (synthetic) media	Compatibility	SKB
Hig	h Water	Content	All Z (synthetic) media		Housings
	Invert En	nulsions	10 and 25 μ Z (synthetic) media		MTA
	Water	Glycols	3, 5, 10 and 25 μ Z (synthetic) media		
Phosphate Esters All Z (synthetic) E (cellulose) medi			All Z (synthetic) media with H (EPR) seal designation and 3 and 10 μ E (cellulose) media with H (EPR) seal designation		MTB
	9	Skydrol®	3, 5, 10 and 25 μ Z (synthetic) media with H.5 seal designation and W (water		21
			removal) media with H.5 seal designation (EPR seals and stainless steel wire mesh in element, and light oil coating on housing exterior)	Charden Line and states of	КТ
				trademark of Solutia Inc.	RT
Pressure	Ele Series	ment 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.	Element	RTI
	-	К3	1K3 KF8 housing uses only one K-size element.	Selection Based on	KFT
	E Media	K10	1K10	Flow Rate	
То		K25	1K25		LRT
800 psi		KZ I K73	1K73		BFT
(55 bar)	Z Media	KZ5	1KZ5		от
	wicula	KZ10	1KZ10		QI
		KZ25	1KZ25		КТК
	Flow	gpm			LTK
		(L/min)	0 50 150 250 380		
Note: Con Applicatio $\Delta \mathbf{P}_{\text{housing}}$	tact facto ons. For m	ory regarding ore informa	g use of E Media in High Water Content, Invert Emulsion and Water Glycol tion, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.	Pressure	Mounted Filters PAF1
KER AD.	for flu	ids with sp. a	$\Delta P_{\text{slowest}} = \text{flow x element } \Delta P \text{ factor x viscosity factor}$	Drop	MAF1
KIO ΔI hous		Flow (L/min)	El. ΔP factors @ 150 SUS (32 cSt):	Information	
¹²	(100)	(200)	(300) K3 .25	Based on	MF2
10			(0.75) K10 .09	and Viscosity	TF1
8			KZ1 .20 KDZ1 .24	· ·	KF3
sq 42 e			KZ3 .10 KDZ3 .12 KZ5 .08 KDZ5 .1		N S
4		TTE 24 PORTINE	(0.25)		LF1—2"
2		SIZE 32 PO			MLF1
0	25	50 Flow gpm	75 100 by 54.9. Viscosity factor: Divide viscosity by 150 SUS (22 St)		SRLT
sp gr = spe	cific gravit	y			RLT
Sizing of el	ements sh	ould be based	l on element flow information provided in the Element Selection chart above.		KF8
Notes			$\Delta \mathbf{P}_{filter} = \Delta \mathbf{P}_{housing} + \Delta \mathbf{P}_{element}$		Kð
			Exercise: Determine AP at 50 gpm (1891/min) for		KJ
			KF81KZ10P24D5 using 200 SUS (44 cSt) fluid.		2K9
			Solution:		3K9
			ΔP _{housing} = 3.0 psi [.20 bar]		QF15
			$\Delta P_{element} = 50 \times .05 \times (200 \div 150) = 3.3 \text{ psi}$		QLF15
			= [189 x (.05÷54.9) x (44÷32) = .24 bar]		SSOI F15
			ΔP_{total} = 3.0 + 3.3 = 6.3 psi		OEDE
			or = [.20 + .24 = .44 bar]		כעזע

KF8 Medium Pressure Filter



NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 3 and 4. *Example*: KZ10V
- Box 3. High collapse media only available with KFN8.
- Box 4. For options H, V, and H.5, all aluminum parts are anodized.
 H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior.
 Viton is a registered trademark of DuPont Dow Elastomers.
 Skydrol is a registered trademark of Solutia Inc.
- Box 5. B porting supplied with metric mounting holes.

Medium Pressure Filter K9 Patent Pending



Features and Benefits

- Extremely versatile multiple inlet and outlet ports; can be used alone or in series with another K9
- Top loading for easy access for element change-out
- Allows consolidation of inventoried replacement elements by using K-size elements
- Multiple inlet and outlet porting options reduce the need for additional adaptors on installation
- Can be fitted with test ports for oil sampling
- Small profile allows filter to be mounted in tight areas
- Various Dirt Alarm[®] options
- Meets HF4 automotive standard

Model No. of filter in photograph is K91KZ5BP20NP20ND5C.





AUTOMOTIVE MANUFACTURING



POWFR GENERATION



STEEL MAKING

Applications

К9

100 gpm

900 psi

60 bar

380 L/min

PAPER INDUSTRY



Max. Operating Pressure: 900 psi (60 bar)

Min. Yield Pressure: 3200 psi (220 bar)

Porting Base & Cap: Cast Aluminum Element Case: Steel Weight of K9-1K: 19 lbs. (8.6 kg) Weight of K9-2K: 30 lbs. (13.6 kg) Weight of K9-3K: 41 lbs. (18.6 kg)

AGRICULTURE

Rated Fatigue Pressure: 750 psi (52 bar) per NFPA T2.6.1-R1-2005 Temp. Range: -20°F to 225°F (-29°C to 107°C)

Full Flow: 80 psi (5.5 bar)

Element Change Clearance: 8.50" (215 mm) for 1K; 17.50" (445 mm) for KK; 26.5" (673

Bypass Setting: Cracking: 40 psi (2.8 bar)



MACHINE

TOOL

VEHICLES



	Filter	k
	Specifications	
		2
		QI
		QLF
		SSQLF
		QF
mm) for 27K		

K9 Medium Pressure Filter Patent Pending





This filter is available in additional porting options not explicitly shown here. Contact factory for details.

Metric dimensions in ().

Element Performance		Filtration Ra	ntio Per ISO 4572/M particle counter (APC) c	Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171			
Information	Element	β _x ≥ 75	β _x ≥ 100	$\beta_x \ge 200$	$\beta_x(c) \ge 200$	$\beta_x(c) \ge 1000$	
mormation	К3	6.8	7.5	10.0	N/A	N/A	
	K10	15.5	16.2	18.0	N/A	N/A	
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2	
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8	
	KZ5	2.5	3.0	4.0	4.8	6.3	
	KZ10	7.4	8.2	10.0	8.0	10.0	
	KZ25	18.0	20.0	22.5	19.0	24.0	

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	К3	54	ККЗ	108	27K3	162
	К10	44	KK10	88	27K10	132
	KZ1	112	KKZ1	224	27KZ1	336
	KZ3	115	KKZ3	230	27KZ3	345
	KZ5	119	KKZ5	238	27KZ5	357
	KZ10	108	KKZ10	216	27KZ10	324
	KZ25	93	KKZ25	186	27KZ25	279
	Elemer	nt Collapse Rating:	150 psid (10 ba	r) for standard elemer	nts	

Flow Direction: Element Nominal Dimensions:

Outside In

K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long

KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long

27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

226 SCHROEDER INDUSTRIES

Patent Pending Medium Pressure Filter K9

	Тур	e Fluid	Appropriate Schr	oeder Media				Fluid	ST
Petrole	eum Based	d Fluids	All E (cellulose) and	d Z (synthetic) m	nedia			Compatibility	SKB
Hig	h Water C	ontent	All Z (synthetic) me	edia					Housings
	Invert Em	ulsions	10 and 25 μ Z (syn	thetic) media					МТА
	Water	Glycols	3, 5, 10 and 25 μ	Z (synthetic) me	nthetic) media				
Phosphate Esters All Z (synth E (cellulose)				edia with H (EP with H (EPR) se	R) seal designat al designation	ion and 3 and 1	0 μ		MTB
Skydrol [®] 3, 5, 10 and 25 µ				Z (synthetic) me	dia with H.5 se	al designation a	nd W (water		21
			mesh in element, a	th H.5 seal desig and light oil coa	gnation (EPR se ting on housing	ais and stainless g exterior)	steel wire	Chudral is a registered	KT
				5	5			trademark of Solutia Inc.	RT
Pressure	Ele Series	ment Part No.	Element selecti petroleum base	ons are predica	ated on the us 40 psi (2.8 bar	se of 150 SUS (3) bypass valve.	32 cSt)	Element	RTI
		К3		1K3		2K3†	3K3	Based on	KFT
	E Media	K10			1K10			Flow Rate	1.57
То		K25			1K25				LKI
900 psi		KZ1		1KZ1	11/72	2KZ1T			BFT
(60 bar)	Z	KZ5			1KZ5				ОТ
	Ivieula	KZ10		1	KZ10				× 1
		KZ25		1	KZ25				KTK
	Flow	gpm	0 20	40	60	80	100		LTK
	11011	(L/min)	0 50	150	2	50	380		Accession
Shown abo Note: Con Applicatio	ve are the tact factor ons. For mo	elements mo ry regarding ore informa	ost commonly used ir g use of E Media ir ation, refer to Fluid	h this housing. In High Water Co I Compatibility	ontent, Invert r: Fire Resistant	Emulsion and V t Fluids, pages 1	Vater Glycol 19 and 20.		for Tank- Mounted Filters PAF1
$\Delta \mathbf{P}_{housing}$				$\Delta \mathbf{P}_{element}$				Pressure	TALL
K9 $\Delta P_{\text{housing}}$	_g for fluid	s with sp gr	= 0.86:	$\Delta P_{element} =$	flow x elemen	t ΔP factor x visc	Drop	MAF1	
(50)	F (150	Flow (L/min)) (250)	(350)	El. ΔP fac	tors @ 150 SUS	(32 cSt):	ЭИ	Based on	MF2
10				кз	25	12	08	Flow Rate	TE1
8				K10	.09	.05	.03	and Viscosity	111
. <u>.,</u> 6			(0.50)	κ71	.02	.01 10	.01		KF3
∆P p				G KZ3	.10	.05	.03		LF1—2"
	CORTINATION	TING		KZ5	.08	.04	.02		141.54
2	ILE SIZE 24 P			KZ10	.03	.03	.02		IVILI-1
0	20 4	l0 60	80 100	If working	g in units of bars	& L/min, divide at	oove factor		SRLT
sp gr = spec	cific gravity	Flow gpm		Viscosity 1	<i>factor:</i> Divide visc	osity by 150 SUS (32	2 cSt).		RLT
Sizing of el	ements sho	uld be based	d on element flow in	formation provid	ded in the Elem	ent Selection chai	rt above.		KF8
Notes				$\Delta P_{\text{filter}} =$	$\Delta \mathbf{P}_{\text{housing}} + \Delta \mathbf{I}$	element			К9
				Determin	ne ∆P at 80 gp	m (303 L/min) f	or		21/0
				K93KZ3B fluid	P20NP20ND5	C using 200 SUS	5 (44 cSt)		2K3
									3K9
				Solution	<u> </u>	havl			QF15
				$\Delta P_{\text{housing}}$	= 6.0 psi [.41	parj			01 61 5
				$\Delta P_{element}$	= 80 x .03 x (200÷150) = 3.2	psi		QLE 13
					= [303 x (.03-	÷54.9) x (44÷32	!) = .23 bar]		SSQLF15
				$\Delta {\rm P}_{\rm total}$	= 6.0 + 3.2 =	9.2 psi			QFD5
					or = [.41 + .23 =	.64 bar]			

9 Medium Pressure Filter Patent Pending



MS13 = Supplied w/ threaded connector & light

MS14DCLCT = Low current MS14DCT

MS13DCT = MS13 (see above), direct current, w/ thermal lockout

MS13DCLCT = Low current MS13DCT MS14DCT = MS14 (see above), direct current, w/ thermal lockout

MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)

Box 7. If location 1 is used as inlet port, dirt alarm will occupy location 2. If location 2 is used as inlet port, dirt alarm will occupy location 1. If dual inlet ports are specified, the only dirt alarm option is pop-up indicator in cap (D5C).

anodized

Elastomers.

NOTES:

Electrical

Visual

Electrical

Visual with

Thermal Lockout

Single Pass Filter Kit **2K9**



Features and Benefits

- Two patent-pending K9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration
- Meets HF4 automotive standard
- 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems
- Top loading for easy access for element changeout
- Allows consolidation of inventoried elements by using K-size elements
- Can be fitted with test points for oil sampling

100 gpm 380 L/min

900 psi

60 bar

Applications

Custom 2K9, contact factory for details.



PAPFR

INDUSTRY



MANUFACTURING

AGRICULTURE



TOOL

MOBILE

VEHICLES

POWER



GENERATION

STEEL MAKING



			RLT
Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	900 psi (60 bar)	Housing	KO
Min. Yield Pressure:	3200 psi (220 bar)	Specifications	KJ
Rated Fatigue Pressure:	750 psi (52 bar) per NFPA T2.6.1-R1-2005		2K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		3K9
Bypass Setting:	Cracking: 40 psi (2.8 bar) each filter housing		
Porting Base & Cap:	Cast Aluminum		QF15
Element Case:	Steel		QLF15
Element Change Clearance:	8.50" (215 mm) for 1K; 17.5" (445 mm) for KK;		
	20.3 (075 11111) 101 27K		SSQLF15
			OFDE

2K9 Single Pass Filter Kit



Metric dimensions in ().

Element Performance Information	Element	Filtration Rates Using automated $\beta_x \ge 75$	tio Per ISO 4572/N particle counter (APC) ca $\beta_x \ge 100$	Filtration Ratio wrt ISO 16889Using APC calibrated per ISO 11171 $\beta_x(c) \ge 200$ $\beta_x(c) \ge 1000$		
	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	KZ1	112	KKZ1	224	27KZ1	336
	KZ3	115	KKZ3	230	27KZ3	345
	KZ5	119	KKZ5	238	27KZ5	357
	KZ10	108	KKZ10	216	27KZ10	324
	KZ25	93	KKZ25	186	27KZ25	279
	Eleme	nt Collapse Rating:	150 psid (10 ba	r) for standard elemer	ts	

Flow Direction: Outsi Element Nominal Dimensions: K:

150 psid (10 bar) for standard elements Outside In

K: 3.9" (99 mm) O.D. x 9.0" (230 mm) long
KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long
27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

Single Pass Filter Kit 2K9

	Тур	e Fluid	Appropriat	e Schroed	ler Media					Fluid	ST
Petroleum Based Fluids All Z (synthetic) media									Compatibility	SKB	
Hig	h Water C	ontent	All Z (synthe	tic) media							Housings
Invert Emulsions 10 and 25 µ Z (synthetic					ic) media					MTA	
Water Glycols 3, 5, 10 and 25 μ Z (s					nthetic) med	ia					
Phosphate Esters All Z (synthetic) me E (cellulose) media w				etic) media media wit	a with H (EPR) h H (EPR) seal	seal designati designation	ion and 3 and	10 µ			МТВ
	S	kydrol®	3, 5, 10 and	25 µ Z (sy	nthetic) med	ia with H.5 sea	al designation	and W (water		21
			mesh in eler	dia with H nent, and	l.5 seal desigr light oil coati	nation (EPR sea ng on housing	als and stainles i exterior)	s steel v	vire	Skydrol is a registered trademark of Solutia Inc.	КТ
					5	5 5	, , , , , , , , , , , , , , , , , , ,				RT
											DTI
	Elei	ment	Flement s	elections	are predicat	ed on the us	e of 150 SUS	(32 cSt)		Element	KII
Pressure	Series	Part No.	petroleun	n based fl	uid and a 40) psi (2.8 bar)	bypass valve			Selection	KFT
		KZ1			1KZ1		2KZ1†			Based on	LRT
To 000 nci	Z	KZ3			11	<z3< td=""><td></td><td></td><td></td><th>Flow Rate</th><td></td></z3<>				Flow Rate	
900 psi (60 bar)	Media	KZ5 K710			11	710					BFT
		KZ25			1K	Z25					QT
		gpm	0	20	40	60	80	1	00		VTV
	Flow	(L/min)	0 50		150	25	50	3	80		KIK
†Double ar	nd triple sta	cking of K-si	ze elements o	an be repl	aced by single	e KK & 27K eler	ments, respectiv	/ely.			LTK
Note: Con Applicatio	itact facto ons. For mo	y regarding pre informa	g use of E Me tion, refer to	edia in Hig o Fluid Co	gh Water Colompatibility:	ntent, Invert I Fire Resistant	Emulsion and Fluids, pages	Water (19 and	Glycol 20.	Prossure	Accessories for Tank- Mounted Filters
nousing						ilaur v alamant	AD factor v vic	cosity fo	stor	Dron	PAF1
2K9 ∆ P _{hou}	_{sing} for fluid	ds with sp g	r = 0.86:		$\frac{\Delta P_{\text{element}}}{EL} = 100 \text{ X element } \Delta P \text{ factor X viscosity factor}$					Information	MAF1
20 (50)	(150) (250)	(350)	I	EI. ΔP factors @ 150 SUS (32 CSt): 1K 2K/KK 3K/27K				27К	Based on	MED
					KZ1	.20	.10)5	Flow Rate	IVITZ
16				(1.0)	KZ3	.10	.05	.0)3	and viscosity	TF1
. <u></u> 12				bar)	KZ5	.08	.04	.0)2		KF3
-d√ 8				∆P (KZ10	.05	.03	.0)2		
		RTING		(0.5)	KZ25	.04	.UZ	.()		LF1—2"
4	SIZE 24				by 54.9.	n units of dars	& L/min, divide a		MLF1		
0	20 4	0 60	80 10	0	Viscosity fa	ctor: Divide visco	osity by 150 SUS (82 cSt).			SRIT
sp gr = spe	cific gravity	Flow gpm									
Sizing of el	ements sho	uld be based	on element	flow inforn	nation provide	ed in the Eleme	ent Selection ch	art abov	e.		RLT
											KF8
Notes					$\Delta \mathbf{P}_{\text{filter}} = \Delta$	$\Delta \mathbf{P}_{\text{housing}} + \Delta \mathbf{P}$	element				KO
					Exercise:	AP at 80 gp	m (303 I /min)	for			KJ
					2K9209DB	BP24P24 usir	ng 150 SUS (3	2 cSt) fl	uid.		2K9
					Solution:						3K9
					$\Delta P_{\text{housing}}$	= 12.0 psi [0.	.8 bar]				0515
					$\Delta P = \frac{1}{100} = 80 \times 103 = 2.4 \text{ psi} [0.2 \text{ har}]$						CI ID
					$\Delta P_{element2}$	= 80 x .05 = 4	4.0 psi [0.3 ba	r]			QLF15
					ΔPtotal	= 12.0 + 2.4	+ 4.0 = 18.4 n	si [1.3 ŀ	parl		SSQLF15
					total						QFD5

2K9 Single Pass Filter Kit



NOTES:

- Box 2. Double and triple stacking of K-size elements can be replaced by KK and 27K elements, respectively. Number of elements must equal 1 when using KK or 27K elements.
- Box 4. Replacement element part numbers are identical to K9 replacement parts. Please reference page 228.
- Box 5. Replacement element part numbers are identical to K9 replacement parts. Please reference page 228.
- Box 6. For options H, V, and H.5, all aluminum parts are anodized. H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior. Viton is a registered trademark of DuPont Dow Elastomers. Skydrol is a registered trademark of Solutia Inc.
- Box 10. Option UU not available in combination with indicator in block.

downstream)
Single Pass Filter Kit 3K9



Features and Benefits

- Three patent-pending K9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration
- Meets HF4 automotive standard
- 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems
- Top loading for easy access for element changeout
- Allows consolidation of inventoried elements by using K-size elements
- Can be fitted with test points for oil sampling

Model No. of filter in photograph is 3K9127EDBBP20P20UUD5C.







MANUFACTURING





100 gpm <u>380 L/min</u>	S Housin
900 psi	М
60 bar	Μ
	I
	K
	L
	B
	К

Applications

		Filters	
		PAF1	
ISTRIAL AUTOMOTIVE MACHINE POWER STEEL MANUFACTURING TOOL CEMERATION MAKING		MAF1	
		MF2	
		TF1	
		KF3	
APER AGRICULTURE MOBILE		LF1—2"	
USIKY VEHICLES		MLF1	
		SRLT	
		RLT	
Flow Rating: Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8	
lax. Operating Pressure: 900 psi (60 bar)	Housing	KO	
Min. Yield Pressure: 3200 psi (220 bar)	Specifications	KJ	
Rated Fatigue Pressure: 750 psi (52 bar) per NFPA T2.6.1-R1-2005		2K9	
Temp. Range: -20°F to 225°F (-29°C to 107°C)		3K9	
Bypass Setting: Cracking: 40 psi (2.8 bar)		0515	
Porting Base & Cap: Cast Aluminum Element Case: Steel		CLID	
nent Change Clearance: 8.50" (215 mm) for 1K; 17.50" (445 mm) for KK; 26.5" (673 mm) for 27K		QLF15	
		SSQLF15	
		OFD5	
		4	

PAPFR INDUSTRY



Porting Base & Cap: Cast Aluminum Element Case: Steel Element Change Clearance: 8.50" (215 mm) for 1



3K9 Single Pass Filter Kit



Metric dimensions in ().

Element Performance	Element	Filtration Rates Using automated $\beta_x \ge 75$	tio Per ISO 4572/N particle counter (APC) ca $\beta_x \ge 100$	Filtration Ratio Using APC calibra $\beta_x(c) \ge 200$	ted per ISO 16889 $\beta_x(c) \ge 1000$	
mormation	KZ1	<1.0	<1.0	<1.0	<4.0	4.2
	KZ3	<1.0	<1.0	<2.0	<4.0	4.8
	KZ5	2.5	3.0	4.0	4.8	6.3
	KZ10	7.4	8.2	10.0	8.0	10.0
	KZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Element	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)
Capacity	KZ1	112	KKZ1	224	27KZ1	336
	KZ3	115	KKZ3	230	27KZ3	345
	KZ5	119	KKZ5	238	27KZ5	357
	KZ10	108	KKZ10	216	27KZ10	324
	KZ25	93	KKZ25	186	27KZ25	279
	Eleme Element No	nt Collapse Rating: Flow Direction: ominal Dimensions:	150 psid (10 ba Outside In K: 3.9" (9	ar) for standard elemen 9 mm) O.D. x 9.0" (23)	ts 0 mm) long	

KK: 3.9" (99 mm) O.D. x 18.0" (460 mm) long 27K: 3.9" (99 mm) O.D. x 27.0" (690 mm) long

Single Pass Filter Kit 3K9

	Тур	e Fluid	Appropriate Schro	oeder Media					Fluid	ST
Petrol	eum Based	l Fluids	All Z (synthetic) me	dia					Compatibility	SKB
Hig	h Water C	ontent	All Z (synthetic) me	dia						Housings
	Invert Em	ulsions	10 and 25 μ Z (synt	hetic) media						MTA
Water Glycols 3, 5, 10 and 25 μ Z (sy				(synthetic) media						1470
Phosphate Esters All Z (synthetic) media E (cellulose) media wit			edia with H (EPR) seal with H (EPR) seal desig	designatic gnation	n and 3 and 1	0μ			MIB	
Skydrol [®] 3, 5, 10 and 25 μ Z ((synthetic) media wit	h H.5 seal	designation a	nd W (wate	er		21
			mesh in element, a	nd light oil coating on	housing	exterior)	Steel wire		Skydrol is a registered trademark of Solutia Inc.	KT
										RT
Pressure	Eler Series	nent Part No.	Element selection	ns are predicated o	n the use	of 150 SUS (3	32 cSt)		Element	RTI
		KZ1	petroleum buset	1KZ1		2KZ1†		_	Selection Based on	KFT
То	7	KZ3		1KZ3	I				Flow Rate	IDT
900 psi	Z Media	KZ5		1KZ5						LKI
(60 bar)		KZ10		1KZ10						BFT
		KZ25		1KZ25			100			ОТ
	Flow	gpm	0 20	40	60	80	100	_		× 1
+Double or	ad tripla sta	(L/min)	0 50	150	250	onto rospostivo	380	_		KTK
Note: Con	nu inple sia	v regarding	ze elements can be r	High Water Content	Invert F	mulsion and V	uy. Vater Glyco	ol		LTK
Applicatio	ons. For mo	ore informa	tion, refer to Fluid	Compatibility: Fire F	Resistant l	luids, pages 1	19 and 20.			Accessories for Tank- Mounted Filters
Δ Γ housing									Dueservus	
				ΔPelement				_	Pressure	PAF1
K9 ΔP_{housin}	ng for fluids	s with sp gr	= 0.86:	$\Delta P_{element} = flow x$	element	AP factor x visc	osity factor	r	Pressure Drop Information	PAF1 MAF1
K9 Δ P _{housin}	ng for fluids	with sp gr Flow (L/min)) (250)	= 0.86:) (350)	$\frac{\Delta P_{element}}{El. \ \Delta P \ factors \ @}$	element . 150 SUS (. 1K	AP factor x visc 32 cSt): 2K/KK	osity factor 3K/27K	r	Pressure Drop Information Based on	PAF1 MAF1
K9 ∆P _{housin} 30 (50	ng for fluids	s with sp gr Flow (L/min))) (250)	(350)	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ KZ1	element / <i>150 SUS (.</i> <u>1K</u> .20	AP factor x visc 32 <i>cSt):</i> <u>2K/KK</u> .10	osity factor <u>3K/27K</u> .05	<u>r</u>	Pressure Drop Information Based on Flow Rate	PAF1 MAF1 MF2
K9 Δ P _{housin} 30 (50 24 (50)	ng for fluids	s with sp gr Flow (L/min))) (250)	= 0.86:	$\frac{\Delta P_{element}}{El. \ \Delta P \ factors @}$ KZ1 KZ3	element / <i>150 SUS (.</i> <u>1K</u> .20 .10	AP factor x visc 32 cSt): <u>2K/KK</u> .10 .05	osity factor <u>3K/27K</u> .05 .03	<u>r</u>	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1
K9 Δ P _{housin} 30 24 	ng for fluids	s with sp gr Flow (L/min))) (250)	= 0.86:	ΔP _{element} = flow x El. ΔP factors @ KZ1 KZ3 KZ5	element . 150 SUS (. 1K .20 .10 .08	AP factor x visc 32 cSt): 2K/KK .10 .05 .04	osity factor <u>3K/27K</u> .05 .03 .02	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3
K9 △P _{housi}	ng for fluids	s with sp gr Flow (L/min)) (250)	= 0.86:	ΔP _{element} = flow x El. ΔP factors @ KZ1 KZ3 KZ5 KZ10 KZ25	element / 150 SUS (. 1K .20 .10 .08 .05 .04	AP factor x visc 32 cSt): .10 .05 .04 .03 .02	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3
K9 ΔP _{housi}	ng for fluids	s with sp gr Flow (L/min))) (250)	= 0.86: (350) (1.5) (0.75)	ΔP _{element} = flow x El. ΔP factors @ KZ1 KZ3 KZ5 KZ10 KZ25 If working in unit	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars &	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 pove factor	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2"
K9 △P _{housi}	ng for fluids	s with sp gr Flow (L/min)) (250)	= 0.86: (350) (1.5) (0.75)	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9.	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars &	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor	<u> </u>	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1
K9 △P _{housi}	ng for fluids	s with sp gr Flow (L/min))) (250)	= 0.86: (350) (1.5) (0.75) 80 100	ΔP _{element} = flow x El. ΔP factors @ KZ1 KZ3 KZ5 KZ10 KZ25 If working in unit by 54.9. Viscosity factor: I	element / 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32	osity factor 3K/27K .05 .03 .02 .02 .01 powe factor 2 cst).	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SBIT
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. Viscosity factor: D	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars &	AP factor x visc 32 c <i>St</i>): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor 2 cst).	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT
K9 ΔP_{housin} 30 - 50 24 - 50 30 - 50 30 - 50 12 - 50 30 - 50 12 - 50 30 - 50 12 - 50 0 - 50	ng for fluids (150) (s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow \times El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ $If working in unit by 54.9.$ $Viscosity factor: If working in unit by 54.9.$	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chai	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 poove factor 2 cst). rt above.	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> If working the provided in the	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos	AP factor x visc 32 c <i>St</i>): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ty by 150 SUS (32 t Selection char	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor 2 cst). rt above.	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8
K9 ΔP_{housin} 30^{-50}_{-24} 30^{-24}_{-12} 30^{-2}_{-2} 30^{-	ng for fluids (15) (15	with sp gr Flow (L/min) (250) (25) (250) (= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element}$ $\frac{\Delta P_{element} = flow \times El. \Delta P factors @$ KZ1 KZ3 KZ5 KZ10 KZ25 If working in unit by 54.9. Viscosity factor: If working in unit by 54.9.	element 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element ng + ΔPele	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chain ment	osity factor 3K/27K .05 .03 .02 .01 powe factor 2 cst). rt above.	r	Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8
K9 ΔP_{housin} 30 (50 24 18 12 6 0 0 50 gr = spe Sizing of el	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. $Viscosity \ factor: If$ ormation provided in t $\Delta P_{filter} = \Delta P_{housin}$ Exercise: Determine ΔP af	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element mg + ΔPele	AP factor x visc 32 c <i>St</i>): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection char ment (303 L/min) fo	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor c cst). rt above.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow \times El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ $If working in unit by 54.9.$ $Viscosity factor: If Constraints of the example o$	element $\frac{150 \text{ SUS}}{150 \text{ SUS}}$ $\frac{1K}{.20}$.10 .08 .05 .04 s of bars & Divide viscos he Element $ng + \Delta P_{ele}$ 80 gpm P24 using	AP factor x visc 32 <i>cSt</i>): 2 <i>K/KK</i> .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chan ment (303 L/min) fo g 150 SUS (32	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 poove factor 2 cSt). rt above. or cSt) fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9
K9 △Phousii 30 (50 24 18 12 6 0 0 5p gr = spe Sizing of el	ng for fluids	s with sp gr Flow (L/min) (250) (25)	= 0.86: (350) (1.5) (0.75) 80 100	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> If working in unit by 54.9. <i>Viscosity factor:</i> If the second s	element , 150 SUS (, 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element $hg + \Delta P_{ele}$ 80 gpm P24 using	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ty by 150 SUS (32 t Selection char ment (303 L/min) for g 150 SUS (32	osity factor 3K/27K .05 .03 .02 .02 .01 bove factor c cst). fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100 I on element flow inf	$\Delta P_{element} = flow \times El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> If working in unit by 54.9.	element $\frac{150 \text{ SUS}}{150 \text{ SUS}}$ $\frac{1K}{.20}$.10 .08 .05 .04 s of bars & Divide viscos he Element $ng + \Delta P_{ele}$ 1000000000000000000000000000000000000	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chan ment (303 L/min) fc g 150 SUS (32 ar]	osity factor <u>3K/27K</u> .05 .03 .02 .01 bove factor cst). fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9 2K9 3K9
K9 △Phousii	ng for fluids	s with sp gr Flow (L/min) (250) (250) (10) (250)	= 0.86:	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> D ormation provided in t $\Delta P_{filter} = \Delta P_{housin}$ Exercise: Determine ΔP at $3K9209EDBBP24$ Solution: $\Delta P_{housing} = 18.0$ $\Delta P_{element1} = 80 x$	element , 150 SUS (, 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element 	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ty by 150 SUS (32 t Selection char ment (303 L/min) for g 150 SUS (32 ar] psi [0.1 bar]	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor cst). fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9 3K9 QF15
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100 I on element flow inf	$\Delta P_{element} = flow \times El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> If working in unit by 54.9. <i>Viscosity factor:</i> If working in unit by 54.9. <i>Viscosity factor:</i> If a second secon	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element $ng + \Delta P_{ele}$ 80 gpm P24 using psi [1.2 b .02 = 1.6 03 = 2.4	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chan ment (303 L/min) fc g 150 SUS (32 ar] psi [0.1 bar] psi [0.2 bar]	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor cst). rt above.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9 2K9 2K9 2K9 2K9
K9 △Phousii 30 (50 24 51 12 6 0 0 50 gr = spe Sizing of el	ng for fluids	s with sp gr Flow (L/min) (250) (250) (10) (250)	= 0.86:	$\Delta P_{element} = flow x$ $El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ If working in unit by 54.9. <i>Viscosity factor:</i> If working in unit by 54.9. <i>AP</i> _{filter} = $\Delta P_{housing}$ = 18.0 $\Delta P_{element1}$ = 80 x $\Delta P_{element2}$ = 80 x	element , 150 SUS (, 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element mg + ΔP_{ele} 80 gpm P24 using psi [1.2 b .02 = 1.6 .03 = 2.4	AP factor x visc 32 cSt): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection char ment (303 L/min) fc g 150 SUS (32 ar] psi [0.1 bar] psi [0.2 bar]	osity factor <u>3K/27K</u> .05 .03 .02 .02 .01 bove factor cst). a cst). or cSt) fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF12" MLF1 SRLT RLT KF8 K9 2K9 2K9 3K9 QF15 QLF15 SSQLF15
K9 ΔP_{housin}	ng for fluids	s with sp gr Flow (L/min)) (250) (2	= 0.86: (350) (1.5) (0.75) 80 100 I on element flow inf	$\Delta P_{element} = flow \times El. \Delta P factors @$ $KZ1$ $KZ3$ $KZ5$ $KZ10$ $KZ25$ $If working in unit by 54.9.$ $Viscosity factor: If the the the the the the the the the the$	element . 150 SUS (. 1K .20 .10 .08 .05 .04 s of bars & Divide viscos he Element 	AP factor x visc 32 cst): 2K/KK .10 .05 .04 .03 .02 L/min, divide at ity by 150 SUS (32 t Selection chan ment (303 L/min) for g 150 SUS (32 ar] psi [0.1 bar] psi [0.2 bar] psi [0.3 bar]	osity factor <u>3K/27K</u> .05 .03 .02 .01 bove factor cst). rt above. or cSt) fluid.		Pressure Drop Information Based on Flow Rate and Viscosity	PAF1 MAF1 MF2 TF1 KF3 LF1—2" MLF1 SRLT RLT KF8 K9 2K9 2K9 2K9 2K9 2K9 2K9 2K9 2K9 2K9

3K9 Single Pass Filter Kit



MS10LC = Low current MS10

MS10LCT = Low current MS10T

MS12LCT = Low current MS12T

MS16LCT = Low current MS16T

MS17LCT = Low current MS17T

MS13DCLCT = Low current MS13DCT

MS14DCLCT = Low current MS14DCT

MS11 = Electrical w/ 5 pin Brad Harrison connector (male end only)

MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)

MS13DCT = MS13 (see above), direct current, w/ thermal lockout

MS14DCT = MS14 (see above), direct current, w/ thermal lockout

MS12LC = Low current MS12 MS15DC = Electrical, direct current normally open, for DC use only

MS15DCNC = Electrical, direct current normally closed, for DC use only

MS16 = Electrical w/ weather-packed sealed connector MS16LC = Low current MS16

MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T

MS10T = MS10 (see above) w/ thermal lockout

MS12T = MS12 (see above) w/ thermal lockout

MS16T = MS16 (see above) w/ thermal lockout

MS17LC = Electrical w/ 4 pin Brad Harrison male connector

NOTES:

- Box 2. Double and triple stacking of K-size elements can be replaced by KK and 27K elements, respectively. Number of elements must equal 1 when using KK or 27K elements.
- Box 4. Replacement element part numbers are identical to K9 replacement parts. Please reference page 228.
- Box 5. Replacement element part numbers are identical to K9 replacement parts. Please reference page 228.
- Box 6. For options H, V, and H.5, all aluminum parts are anodized.
 H.5 seal designation includes the following: EPR seals, stainless steel wire mesh on elements, and light oil coating on housing exterior.
 Viton is a registered trademark of DuPont Dow Elastomers.
 Skydrol is a registered trademark of Solutia Inc.
- Box 10. Option UU not available in combination with indicator in block.

236 SCHROEDER INDUSTRIES

Flectrical

Electrical with

Thermal

Lockout

Electrical

Visual

Flectrical

Visual with

Thermal Lockout

In-Line Filter **QF15**



Model No. of filter in photograph is QF1516QZ10P24MS10AC.



POWFR

GENERATION





STEEL

MAKING





PAPFR

INDUSTRY

MINING TECHNOLOGY



MOBILE VEHICLES

	450 apm	ST
	1700 L/min	SKB Housings
	1500 psi	MTA
	100 bar	MTB
		ZT
		КТ
		RT
		RT
		KFT
		LRT
		BFT
		QT
	Viton is a registered	КТК
	trademark of DuPont Dow Elastomers.	LTK

Applications

Accessories for Tank- Mounted Filters
PAF1
MAF1
MF2
TF1
KF3
LF1—2"

Filter Flow Rating: Up to 450 gpm (1700 L/min) for 150 SUS (32 cSt) fluids Housing Max. Operating Pressure: 1500 psi (100 bar) Specifications Min. Yield Pressure: 4900 psi (340 bar) Rated Fatigue Pressure: 800 psi (55 bar), per NFPA T2.6.1-R1-2005 Temp. Range: -20°F to 225°F (-29°C to 107°C) Bypass Setting: Cracking: 30 psi (2.1 bar) Full Flow: 55 psi (3.8 bar) QF15 Porting Base & Cap: Ductile Iron Element Case: Steel Weight of QF15-16Q: 139.0 lbs. (63.0 kg) Weight of QF15-39Q: 198.0 lbs. (90.0 kg) Element Change Clearance: 16Q 12.0" (305 mm) 39Q 33.8" (859 mm)

QF15 In-Line Filter





Petrol Hig	ן leum Ba gh Wate	Type FluidAsed FluidsAr ContentA	ppropriate Schroe I E (cellulose) and Z I Z (synthetic) media	der Media (synthetic) media a					Fluid Compatibility	ST SKI Housing
	Invert	Emulsions 1) and 25 μ Z (synthe	etic) media						riousing
	Wat	er Glycols 3	5, 10 and 25 µ Z (s	synthetic) media ia with H (EPR) seal c	losianatio	h				MT
	позрп				csignation	1				MTI
										Z
	E	lement	Element selection	ns are predicated on	the use of	150 SUS (3)	2 cSt) pet	roleum	Element	K
Pressure	Series	Part No.	based fluid and 3	" flange porting with	a 30 psi (2.	l bar) bypas	s valve.		Selection	K
		16 & 39QZ1	16QZ1	16QZ3		39QZ3			Based on	R
		16 & 39QZ5		16QZ5		39QZ5	0710		Flow Rate	RT
		16 & 39QZ25		16QZ25 & 3	39QZ25		QZIU			KF
То		16 & 39QCLQFZ	16QCLQF	Z1 39QC	LQFZ1					
1500 psi	Z	16 & 39QCLQFZ	5 16C	CLQFZ5	39Q	CLQFZ5				LR
(100 bar)	IVIEUIa	16 & 39QCLQFZ	0 160	QCLQFZ10		39QCLQI	FZ10			BF
		16 & 39QCLQFZ	16QPMLZ1	39QPMLZ	21	39QC	LQFZZO			
		16 & 39QPMLZ3	160	PMLZ3	39Q	PMLZ3				Q
		16 & 39QPMLZ5	160	2PMLZ5 DPMLZ10	39Q	390PML	Z10			KT
		16 & 39QPMLZ2	5	16QPMLZ25			39QPML	.Z25		1.77
	Flow	gpm	0 100	200	30	00	400	450		LI
P housing		<i>a</i>		$\Delta \mathbf{P}_{\text{element}}$	element A	P factor x y	viscosity 1	actor	Pressure Drop	PAF MAF
QF15 ∆ P _h	_{iousing} for	fluids with sp gr	= 0.86:	$\frac{\Delta P_{element}}{EL \Delta P_{factors} @ 1}$		$\frac{1}{2} cSt$	iscosity 1	actor	Information	
20	(500) (1000)	(1500)	16QZ1	.09	39QZ1		.03	Based on	
10			(1.25)	16QZ3	.04 .04	39QZ3 39QZ5		.01 .01	Flow Rate	TF
10			(1.00)	16QZ10 . 16QZ25 .	.03 .01	39QZ10 39QZ25) 5	.01 .01		KF
^{isd} ¹² ⁴	1.5'' 4.B		PP (bar)	16QCLQFZ1 16QCLQFZ3 16QCLQFZ5	.07 .05 .05	39QCL0 39QCL0 39QCL0	QFZ1 QFZ3 QFZ5	.03 .02 .02		LF1—2
4	/	<u> </u>	(0.50)	16QCLQFZ10 16QCLQFZ25	.04 .03	39QCL0 39QCL0	QFZ10 QFZ25	.01 .01		MLF
		200 300	400.450	16QPMLZ1 16QPMLZ3	.08 .05	39QPM 39QPM	LZ1 LZ3	.03 .02		SRL
in ar – sne		Flow gpm	100 100	16QPMLZ5 16QPMLZ10 16QPMLZ25	.05 .04 .02	39QPM 39QPM 39QPM	LZ5 LZ10 LZ25	.02 .01 .01		RĽ
sp gi – spe	ecific grav	, ity		If working in units by 54.9.	of bars &	L/min, divide	e above f	actor		KF
Sizing of e	elements	should be based o	n element flow infor	Viscosity factor: D mation provided in th	ivide viscosi ne Element	ty by 150 SUS Selection c	(32 cSt). hart abo	ve.		K
				$\Delta \mathbf{P}_{filter} = \Delta \mathbf{P}_{hous}$	$_{ing} + \Delta \mathbf{P}_{el}$	ement				2 K
Notes				Exercise: Determine ∆P at OF1516O73VF40	t 150 gpm	(570 L/mii	n) for 14 cSt) fl	uid		3K
				Solution:	bo using	200 505 (-	H (50) II	ulu.		QF1
				$\Delta P_{\text{housing}} = 1 \text{ ps}$	si [.07 bar]				QLF1
				$\Delta P_{element} = 150$	x .04 x (2	00÷150) =	8.0 psi			SSQLF1
				or = [570	0 x (.04÷5	4.9) x (44÷	÷32) = .5	57 bar]		QFD
				$\Delta P_{\text{total}} = 1.0$ or = [07	+ 8.0 = 9.	0 psi 54 barl				





MS17LCT = Low current MS17T

MS13DCLCT = Low current MS13DCT

MS14DCLCT = Low current MS14DCT

MS13 = Supplied w/ threaded connector & light

MS13DCT = MS13 (see above), direct current, w/ thermal lockout

MS14DCT = MS14 (see above), direct current, w/ thermal lockout

MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4, plus the letter V. *Example*: 16QZ1V
- Box 3. QCLQF are CoreCentric[®] coreless elements – housing includes rigid metal core. QPML are deep-pleated elements with more media and higher dirt holding capacity.
- Box 4. For option W, Box 3 must equal Q.
- Box 5. All elements for this filter are supplied with Viton seals. Seal designation in Box 5 applies to housing only. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 6. F24M, F32M, F40M and F48M are supplied with metric flange mounting holes.

Integral inlet and outlet test points are standard on all models.

240 SCHROEDER INDUSTRIES

Electrical

Visual

Flectrical

Visual with

Thermal Lockout

Base-Ported Filter QLF15



Features and Benefits

- In-line version also available
- Element changeout from the top minimizes oil spillage
- Available with optional core assembly to accommodate coreless elements
- Offered with standard Q, QPML deep-pleated and QCLQF coreless elements in 16" and 39" lengths with Viton® seals as the standard
- Offered in pipe, SAE straight thread, and flange porting
- Integral inlet and outlet test points are standard on all models
- WQLF15 model for water service also available - refer to Section 5 of this catalog
- Various Dirt Alarm[®] options

Model No. of filter in photograph is QLF1539QZ5F4850D5.



POWER

GENERATION



STEEL

MAKING





PAPER

INDUSTRY







MOBILE VEHICLES

500 apm	ST
1900 L/min	SKB Housings
1500 psi	МТА
100 bar	МТВ
	ZT
	КТ
	RT
	RTI
	KFT
	LRT
	BFT
	QT
Viton is a registered	КТК
trademark of DuPont Dow Elastomers.	LTK

Applications

TF1
KF3

Flow Rating:	Up to 500 gpm (1900 L/min) for 150 SUS (32 cSt) fluids	Filter	KF8
Max. Operating Pressure:	1500 psi (100 bar)	Housing	KO
Min. Yield Pressure:	4900 psi (340 bar)	Specifications	K.J
Rated Fatigue Pressure:	800 psi (55 bar), per NFPA T2.6.1-R1-2005		2K9
Temp. Range:	-20°F to 225°F (-29°C to 107°C)		3K9
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 55 psi (4 bar)		QF15
Porting Base & Cap: Element Case:	Ductile Iron Steel		QLF15
Weight of QLF15-16Q: Weight of QLF15-39Q:	121.0 lbs. (55.0 kg) 180.0 lbs. (82.0 kg)		SSQLF15
Element Change Clearance:	16Q 12.00" (305 mm) 39Q 33.80" (859 mm)		QFD5

QLF15 Base-Ported Filter



Base-Ported Filter QLF15

	-	Type Fluid	Appropriate Schro	eder Media					Fluid	ST
Petrol	eum Ba	sed Fluids	All E (cellulose) and	Z (synthetic) m	iedia				Compatibility	SKR
Hig	gh Wate	er Content	All Z (synthetic) med	dia						Housings
	Invert	Emulsions	10 and 25 µ Z (synt	hetic) media						
	Wat	er Glycols	3, 5, 10 and 25 μ Z	(synthetic) med	dia 2) ang daging stir	_		_		MTA
	Phosph	late Esters	All Z (synthetic) me	dia with H (EPF	<) seal designatio	n		_		МТВ
										21
-		Element	Element selecti	ons are predica	ted on the use o	f 150 SU	S (32 cSt)		Element	КТ
Pressure	Series	Part No.	petroleum base	d fluid and 3" f	lange porting wi	ha 30 p	osi (2.1 bar)	bypass.	Selection	DT
		16 & 39QZ3	10021	16QZ3	39021	Z3			Based on	KI
		16 & 39QZ5		16QZ5	390	Z5	20.0740	_	Flow Rate	RTI
		16 & 39Q210 16 & 39Q225		16Q210 16Q2	Z25 & 390Z25		39QZ10			VET
-		16 & 39QCLQF	Z1 16QCLC)FZ1	39QCLQFZ1			_		KFI
lo 1500 psi	Z	16 & 39QCLQF	Z3 16C	CLQFZ3	39QCLC	FZ3				LRT
(100 bar)	Media	16 & 39QCLQF	Z10 1	6QCLQFZ10	550020	39QCLQ	FZ10			DET
		16 & 39QCLQF	Z25	16QCLQFZ25	200011171	39	QCLQFZ25			BEI
		16 & 39QPMLZ	3 16QPIVIL	PMLZ3	39QPIMILZ I 39QPM	Z3				QT
		16 & 39QPMLZ	5 16Q	PMLZ5	39QPM	_Z5		_		1/71/
		16 & 39QPMLZ	10 25	I6QPMLZ10 16OPMLZ	725	39QPM	LZ10 390PMI 72	5		KIK
			0 100	200	300	4()0	500		LTK
	Flow	(L/min)	0	500	1000	15	00	1900		
Note: Cor Applicatio	ntact fac ons. For	tory regarding more informa	use of E Media in tion, refer to Fluid	High Water Co Compatibility:	ontent, Invert Er Fire Resistant F	nulsion luids, pa	and Water ages 19 and	Glycol d 20.	Dualation	Mounted Filters PAF1
$\Delta \mathbf{P}_{housing}$				ΔP _{element}					Pressure	MAF1
QLF15 ∆ P	housing fo	r fluids with sp	gr = 0.86:	$\Delta P_{element} =$	flow x element	P factor	x viscosity	factor	Drop	
	(500)	Flow (L/min)	(1500)	El. ΔP fact	tors @ 150 SUS (3	2 cSt):	74	0.2	Information Based on	MF2
20	(500)	(1000)	(1500) (1900)	16QZ1	.09 .04	39Q 39Q	Z3	.03	Flow Rate	TF1
16		\$/ 7	(1.25)	16QZ5 16QZ10	.04 .03	39Q 39Q	Z5 Z10	.01 .01	and Viscosity	
.= 12	0/1 5		(1.00)	16QZ25	.01	39Q	Z25	.01		KF3
sd dy	4		e Flange		Z1 .07 Z3 .05	39Q 39Q	CLQFZ1 CLQFZ3	.03 .02		LF1—2"
~ 8		- ŷ - Ŷ	3"4-BOIT (0 50)	16QCLQF	Z5 .05 710 04	39Q	CLQFZ5	.02		
4			(0.50)	16QCLQF	Z25 .03	39Q	CLQFZ25	.01		IVILF1
				16QPMLZ 16QPMLZ	.08 .05	39Q 39Q	PMLZ1 PMLZ3	.03 .02		SRLT
U	100	Flow gpm	400 500	16QPMLZ 16QPMLZ	. 05 10 04	39Q	PMLZ5 PMLZ10	.02 01		DIT
sp gr = spe	ecific gra	vity		16QPMLZ	25 .02	39Q	PMLZ25	.01		KLI
				If working by 54.9.	in units of bars &	L/min, di	vide above f	actor		KF8
				Viscosity fa	actor: Divide viscos	ty by 150	SUS (32 cSt).			KQ
Sizing of e	lements	should be based	on element flow inf	ormation provid	led in the Elemen	t Selectio	on chart abo	ove.		R0
				$\Delta \mathbf{P}_{\text{filter}} =$	$\Delta \mathbf{P}_{\text{housing}} + \Delta \mathbf{P}_{\text{e}}$	ement				2K9
Notes				Exercise: Determin	he ΔP at 150 gpn	1 (570 L/	min) for			3K9
				QLF 15 16Q	23VF40D5 using	200 50	5 (44 CST) T	iuia.		QF15
				Solution:	1	1				OLE15
				$\Delta P_{\text{housing}}$	= 1 psi [.07 bai	.]				-QLF15
				$\Delta P_{element}$	= 150 x .04 x (2	200÷150) = 8.0 psi			SSQLF15
					= [570 x (.04÷5	4.9) x (4	44÷32) = .!	57 bar]		QFD5
				ΔP_{total}	= 1.0 + 8.0 = 9	0 psi				
					or = [.07 + .57 = .	54 bar]				

QLF15 Base-Ported Filter



BOX 8

Dirt Alarm [®] Options							
Omit = None							
Visual	DPG = Standard differential pressure gauge D5 = Visual pop-up D5C = D5 in cap						
Visual with Thermal Lockout	D8 = Visual w/ thermal lockout D8C = D8 in cap						
Electrical	MS5 = Electrical w/ 12 in. 18 gauge 4-conductor cable MS5LC = Low current MS5 MS10 = Electrical w/ DIN connector (male end only) MS10LC = Low current MS10 MS11 = Electrical w/ 12 ft. 4-conductor wire MS12 = Electrical w/ 5 pin Brad Harrison connector (male end only) MS12LC = Low current MS12 MS15DC = Electrical, direct current normally open, for DC use only MS15DCNC = Electrical, direct current normally closed, for DC use only MS16 = Electrical w/ weather-packed sealed connector MS16LC = Low current MS16 MS17LC = Electrical w/ 4 pin Brad Harrison male connector						
Electrical with Thermal Lockout	MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T MS10T = MS10 (see above) w/ thermal lockout MS10LCT = Low current MS10T MS12LT = MS12 (see above) w/ thermal lockout MS12LCT = Low current MS12T MS16T = MS16 (see above) w/ thermal lockout MS16LCT = Low current MS16T MS17LCT = Low current MS17T						
Electrical Visual	MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector & light (male end)						
Electrical Visual with Thermal Lockout	MS13DCT = MS13 (see above), direct current, w/ thermal lockout MS13DCLCT = Low current MS13DCT MS14DCT = MS14 (see above), direct current, w/ thermal lockout MS14DCLCT = Low current MS14DCT						

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4, plus the letter V. *Example*: 16QZ1V
- Box 3. QCLQF are CoreCentric[®] coreless elements – housing includes rigid metal core. QPML are deep-pleated elements with more media and higher dirt holding capacity.
- Box 4. For option W, Box 3 must equal Q.
- Box 5. All elements for this filter are supplied with Viton seals. Seal designation in Box 5 applies to housing only. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 6. B24, B32 and B40 are supplied with metric mounting holes. F24M, F32M, F40M and F48M are supplied with metric flange mounting holes.

Integral inlet and outlet test points are standard on all models.

Stainless Steel Base-Ported Filter SSQLF15

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Features and Benefits

- In-line version also available
- Element changeout from the top minimizes oil spillage
- Offered with standard Q and QPML deep-pleated coreless elements in 16" and 39" lengths with Viton[®] seals as the standard
- Offered in pipe, SAE straight thread, and flange porting
- Integral inlet and outlet test points are standard on all models
- Various Dirt Alarm[®] options

Flow Rating: Up to 500 gpm (1900 L/min) for 150 SUS (32 cSt) fluids

Temp. Range: -20°F to 225°F (-29°C to 107°C)

Full Flow: 55 psi (4 bar)

39Q 33.80" (859 mm)

Bypass Setting: Cracking: 30 psi (2 bar)

All stainless steel provides capability with water-based fluids

Model No. of filter in photograph is SSQLF1539QZ5F4850D5.

Max. Operating Pressure:1500 psi (100 bar)Min. Yield Pressure:4500 psi (310 bar)Rated Fatigue Pressure:Contact factory

Porting Base & Cap:
Element Case:Stainless SteelWeight of SSQLF15-16Q:
Weight of SSQLF15-39Q:163.0 lbs. (74.0 kg)240.0 lbs. (109.0 kg)240.0 lbs. (109.0 kg)Element Change Clearance:16Q12.00" (305 mm)



	Applications	for Tank- Mounted Filters
		PAF1
		MAF1
		MF2
		TF1
		KF3
		LF1—2"
		MLF1
		SRLT
		RLT
	Filter	KF8
	Specifications	К9
		2K9
		3K9
_		QF15
		QLF15
		SSQLF15
		OEDS

500 gpm *1900 L/min*

1500 psi

100 bar

Viton is a registered trademark of DuPont Dow Elastomers.

SSQLF15 Stainless Steel Base-Ported Filter

	1 952 2 11/2 2 2 2 2 3 " 3" 3"	DIMEN PORT SIZE 2" (38) (51) 2" (64) (76) (4 bolt port onl c dimensions in	ISIONAL DATA DIM A 2.00 (51) 4 2.00 (51)	AM R SUPPLIED ERS DIM B .000 (102) .000 (102) .000 (127) .000 (127)		OPTIONAL DIRTI ALARM OR ELECTRIC SWITCH	DOWNSTREAM HROEDER ST POINT SUPPI ALL FILTERS	LED CCAP TOF 20 F 20 F 20 F 20 F 20 F 20 F 20 F 20	INSTALLATION QUE = T-LBS. T PASS VALVE PECTION G PTIONAL PG GAUGE HOWN ALEED LUG ES
Element				Filtrat Using autor	tion Ratio Per IS	50 4572 / NFPA ⁻ hter (APC) calibrate	T3.10.8.8 d per ISO 4402	Filtration Rati	o wrt ISO 16889 ated per ISO 11171
Information	Ele	ment		$\beta_x \ge 1$	75 ß	_x ≥ 100	β _x ≥ 200	$\beta_{\rm x}(c) \ge 200$	$\beta_x(c) \ge 1000$
		Z1/PMLZ1		<1.0)	<1.0	<1.0	<4.0	4.2
		Z3/PMLZ3		<1.0)	<1.0	<2.0	<4.0	4.8
	16Q	Z5/PMLZ5		2.5		3.0	4.0	4.8	6.3
		Z10/PMLZ10)	7.4	ļ.	8.2	10.0	8.0	10.0
		Z25/PMLZ25	5	18.0)	20.0	22.5	19.0	24.0
		Z1/PMLZ1		<1.0)	<1.0	<1.0	<4.0	4.2
		Z3/PMLZ3		<1.0)	<1.0	<2.0	<4.0	4.8
	39Q	Z5/PMLZ5		2.5	; ;	3.0	4.0	4.8	6.3
		Z10/PMLZ10)	7.4	ļ	8.2	10.0	8.0	10.0
		Z25/PMLZ2	5	18.0)	20.0	22.5	19.0	24.0
Dirt Holding		Element	DHC (gm)		Element	DHC (gm)		
Capacity		21	2/6		PMLZ1	307			
	100	23	283			315			
	16Q	25	351		PMLZ5	364			
		210	280		PIVILZ10	330			
		225	254		PIVILZ25	1405			
		Z I	9/4			1485			
	200	Z3 75	054			1525			
	29Q	710	9.14			1/20			
		725	853		PMI 725	1452			
		Element No	t Collapse Ra Flow Direc minal Dimens	nting: Q a ction: Ou sions: 16 16 39 39	and QPML: 15 tside In Q: 6.0" QPML: 6.0" Q: 6.0" QPML: 6.0"	0 psid (10 bar (150 mm) O.D (150 mm) O.D (150 mm) O.D (150 mm) O.D) 9. x 16.85" (4 9. x 16.00" (4 9. x 38.70" (9 9. x 37.80" (9	430 mm) long 405 mm) long 985 mm) long 960 mm) long	

Stainless Steel Base-Ported Filter SSQLF15

Pressure Pressure Series Element Part No. Element selections are predicated on the use of 150 SUS (32 CS) performation based fluid and 32 in 2 (synthetic) media Compatibility Pressure To perform the selections are predicated on the use of 150 SUS (32 CS) Performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation based fluid and 3 flare porting with a 30 ppl (21 bar) bypass. To performation pere		1	ype Fluid	Appropriate Schroed	ler Media				Fluid	ST
High Water Context All & Synthetich media Headings Water Glycols 3, 5, 10 and 25 µ Z Synthetich media Mile Water Glycols 3, 5, 10 and 25 µ Z Synthetich media Mile Pressure Series Element Element selections are predicated on the use of 159 SUS (32 CS) Selection Pressure Series Element selections are predicated on the use of 159 SUS (32 CS) Selection Too Sign 1621 Sign 2020 Sign 2020 Sign 2020 Too Sign 2020 16021 Sign 2020 Sign 2020 Sign 2020 Too per up to file is Sign 2020 16027 Sign 2020 Sign 2020 Sign 2020 Sign 2020 Too per up to file is Sign 2020 16027 Sign 2020 Sign 2020 Sign 2020 Sign 2020 Sign 2010 S	Petrol	eum Ba	sed Fluids	All E (cellulose) and Z ((synthetic) media	I			Compatibility	SKB
Water Emissions D and 25 J2 Sphilled D model Water Explore All Z (synthetic) media with H (FR) sead designation Pressure Series Part No. Element selections are predicated on the use of 159 SUS (52,50) If is a signification of the predication of the predicated on the use of 159 SUS (52,50) If is a signification of the predicated on the use of 159 SUS (52,50) If is a signification of the predicated on the use of 159 SUS (52,50) If is a signification of the predication of the predicated on the use of 159 SUS (52,50) If is a signification of the predication of the predicated on the use of 159 SUS (52,50) If is a signification of the predicated on the use of 159 SUS (52,50) If is a signification of the predicated on the use of 159 SUS (52,50) If is a signification of the signification of the predicated on the use of 159 SUS (52,50) If is a signification of the signification	Hig	gh Wate	r Content	All Z (synthetic) media	+; -)					Housings
Pressure Series Element selections are predicated on the use of 150 SUS (22 CS) per section and 37 flange porting with a 30 per (21 har) bypass. Element selections are predicated on the use of 150 SUS (22 CS) per section and 37 flange porting with a 30 per (21 har) bypass. T too predicate the section set per section set predicated on the use of 150 SUS (22 CS) per section set per sectin set per section set per section set per sect per per section se		Wat	er Glycols	$3 5 10 \text{ and } 25 \text$	(nthetic) media					МТА
$\frac{Pressure}{Pressure} \frac{Pressure}{Pressure} \frac{Pressure}{Pressure$		Phosph	ate Esters	All Z (synthetic) media	with H (EPR) se	al designatio	n			
$\frac{1}{100 \text{ km}} = \frac{1}{100 \text{ km}} $								_		MTB
Pressure Element selections are predicated on the use of 159 5US (32 c.51) protein based fluid and 3' frage porting with a 30 pi (21 bar) bypas. Figure 16 (23 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 22 3 30 22 1) (15 20 21 1) (15 2										7T
$\frac{Pressure}{Series} \frac{Ement}{Part No.} \frac{Element selections are predicated on the use of 150 5US (32 c.50)}{16 (23 390 (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3) (21 16 (22 3 390 (22 3 390 (22 3) (21 16 (22 3 390 (22 3 $										
$\frac{Pressure}{Pressure} \underbrace{Series} \frac{Pressure}{Pressure} \underbrace{Pressure}{Pressure} Pressure$										KT
PressureLet limitpressureLet limitressureLet limitressureLet limitressureLet limitressureLet limitressureLet limitressureLet limitressureLet limitressureLet limitressurer		1	-	et			(450 CHC (22 -	-0	Element	RT
$\frac{1}{16223} \frac{1}{16223} \frac{1}{1623} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{16223} \frac{1}{1623} $	Pressure	Series	Part No.	petroleum based f	s are predicated fluid and 3" flang	on the use o le porting wi	r 150 SUS (32 c) h a 30 psi (2.1	bar) bypass.	Soloction	
$\frac{1}{16225} = \frac{19(23)}{16225} = \frac{19(23)}{16225} = \frac{39(23)}{16225} = \frac{19(23)}{16225} = \frac{19(23)}{16225}$			16 & 39QZ1	16QZ1	39Q	Z1	20		Based on	KII
$\frac{1}{1500 \text{ pain}} \begin{bmatrix} 168, 3390210 \\ 158, 33902M121 \\ 158, 33902M122 \\ 158, 33902M12 \\ 158, 3390M12 \\ 158, 3390M1 \\ 158$			16 & 39QZ3	1	16QZ3	390	23)Z5		Flow Rate	KFT
$\frac{1}{100 \text{ br}} \begin{bmatrix} z \\ \text{ redia} \end{bmatrix} \begin{bmatrix} 16 & 3392\text{ red}{25} & 162\text{ PMLZ1} & 152\text{ PMLZ1} & 392\text{ PMLZ1} \\ \hline 16 & 3392\text{ PMLZ2} & 162\text{ PMLZ2} & 392\text{ PMLZ2} \\ \hline 16 & 3392\text{ PMLZ2} & 162\text{ PMLZ2} & 392\text{ PMLZ2} \\ \hline 16 & 3392\text{ PMLZ2} & 162\text{ PMLZ2} & 392\text{ PMLZ2} \\ \hline 16 & 3392\text{ PMLZ2} & 162\text{ PMLZ2} & 392\text{ PMLZ2} \\ \hline 16 & 3392\text{ PMLZ2} & 162\text{ PMLZ2} & 392\text{ PMLZ2} \\ \hline 16 & 3392\text{ PMLZ2} & 100 & 200 & 300 & 400 & 500 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1500 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 3392\text{ PMLZ2} & 500 & 1000 & 1500 & 1900 \\ \hline 16 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & 10000 & $			16 & 39QZ10		16QZ10		39QZ1)		LDT
$\frac{r_{00}}{1500 \text{ psi}} \begin{bmatrix} z_{0} \\ r_{150} \\ r_{10} \\ r$			16 & 39QZ25	1 1CODM 71	16QZ25	& 39QZ25				LRI
$\frac{1500 \text{ ps}}{16} \frac{\text{Meda}}{\text{is } \frac{15}{6} \frac{390 \text{PMLZS}}{390 \text{PMLZS}} \frac{160 \text{PMLZS}}{16} \frac{390 \text{PMLZS}}{160 \text{PMLZS}} \frac{1390 \text{PMLZS}}{160 \text{PMLZS}} \frac{1}{100 \text{ s} \frac{390 \text{PMLZS}}{100 \text{ s} \frac{1}{390 \text{ PMLZS}}} \frac{1}{100 \text{ s} \frac{390 \text{PMLZS}}{100 \text{ s} \frac{1}{390 \text{ s} 00}} \frac{1}{100 \text{ s} 00} \frac{1}{100 $	То	Z	16 & 39QPIVIL	23 16QPINILZ I 23 16OPM	1LZ3	390PM	LZ3			BFT
$\frac{(100 \text{ bar})}{\text{16} \text{ 8} 39QPML210} \underbrace{16QPML210}{16QPML225} \underbrace{139QPML225}{16QPML225} \underbrace{139QPML225}{16QPML225} \underbrace{139QPML225}{16QPML225} \underbrace{139QPML225}{19QPML225} \underbrace{139QPML225}{19QPML225} \underbrace{139QPML225}{19QPML225} \underbrace{139QPML225}{19QPML25} \underbrace{130QPML225}{10QPML25} \underbrace{130QPML23}{10QPML25} $	1500 psi	Media	16 & 39QPML	16QPN	1LZ5	39QPM	LZ5			
$\frac{1}{100} \frac{1}{100} \frac{1}{200} \frac{1}{300} \frac{1}{400} \frac{1}{500} \frac{1}{1000} \frac{1}$	(100 bar)		16 & 39QPML	210 16C	PMLZ10		39QPMLZ10			QT
FlowgimU100200300400300Shown above are the elements most commonly used in this housing.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.Accessories Fire Resistant Fluids, pages 19 and 20.Accessories Fire Resistant Fluids, pages 19 and 20. $\Delta P_{bouxing}$ $\Delta P_{element}$ $\Delta P_{element}$ PressureDrop Information Based on Flow Rate 1622 5.Pressure $affilid\Delta P_{element}\Delta P_{element} = flow x element \Delta P factor x viscosity factor1622 1.031622 3.041622 5.011622 5.011622 5.011622 5.011622 5.011622 5.011622 5.011622 5.02160 PML21 0.03160 PML22 5.02160 PML21 0.03160 PML22 5.02160 PML21 0.04160 PML2 1.04160 PML2 10$			16 & 39QPML	.25	16QPMLZ25	200	39QPI	VILZ25		KTK
$\frac{1000}{100} \frac{1000}{100} 1$		Flow	ypin (L/min)	0 100	200	1000	1500	1000		KIK
Accessories Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20. Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.	Shown abo	ove are th	e elements mo	st commonly used in this	bousing	1000	1500	1900		LTK
$\frac{\Delta P_{element}}{SQLF15} \Delta P_{hoosing} for fluids with sp gr = 0.86:$ $\frac{\Delta P_{element}}{Flow} \frac{(L/min)}{(100)} (1500) (1500) (1900) (1500) (1900) (1500) (1900) (1500) (1900) (1500) (1900) (1500) (1900) (1500) (1900) (1602 S 0.04 390 Q2 S 0.01 16 Q2 S 0.01 390 Q2 MLZ 5 0.02 16 QPMLZ 1 0.08 390 QPMLZ 1 0.03 16 Q2 Z 0.02 16 QPMLZ 1 0.03 390 QPMLZ 1 0.03 16 Q2 Z 0.02 16 QPMLZ 5 0.05 390 QPMLZ 5 0.02 16 QPMLZ 5 0.02 390 QPMLZ 5 0.02 16 QPMLZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.02 16 QPMLZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.02 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPMLZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.02 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.01 16 QPM LZ 5 0.02 390 QPM LZ 5 0.02 16 QPM LZ 5 0.02 30 QPM LZ 1 0.02 16 QPM LZ 5 0.02 16 QPM LZ 0 0.01 16 QPM LZ 0 0.01 16 QPM LZ 0 0.02 30 QPM LZ 1 0.02 16 QPM LZ 0 0.01 16 QPM LZ 0 0.02 30 QPM LZ 0 0.01 16 QPM LZ 0 0.01 16 QPM LZ 0 QPM LZ 0 0.01 16 QPM LZ 0 QPM L$	Applicatio	ons. For	more informa	tion, refer to Fluid Co	mpatibility: Fire	e Resistant F	luids, pages 1	9 and 20.	Proceuro	for Tank- Mounted Filters PAF1
SSQLF15 $\Delta P_{housing}$ for fluids with sp gr = 0.86: Flow (L/min) Top (1000) (1500) (1900) Top (1000) (1500) (1900) Top (125) Top (125)	△ housing								Drop	MAF1
$\frac{1}{1000} = \frac{1}{10000} = \frac{1}{100000} = \frac{1}{1000000} = \frac{1}{10000000} = \frac{1}{10000000000000000000000000000000000$	SSQLF15 /	∆ P housing 1	or fluids with	sp gr = 0.86:	$\frac{\Delta P_{element}}{5000} = flow$	v x element	AP factor x visco	osity factor	Information	WI/AT 1
$\frac{20}{160} - \frac{1000}{100} - 1000$		(500)	Flow (L/min) (1000)	(1500) (1900)	EI. ΔP factors	@ 150 SUS (: 09	39071	03	Based on	MF2
$\frac{16}{9} + \frac{1}{9} + 1$	20	(500)			16QZ3	.04	39QZ3	.01	Flow Rate	TF1
$\frac{1}{9} \frac{1}{9} \frac{1}$	16			8	16QZ5 16OZ10	.04 03	39QZ5 39QZ10	.01 01	and Viscosity	
$\frac{\Delta}{P_{element}} = \frac{\Delta P_{iousing} + \Delta P_{element}}{P_{element}}$ $\frac{\Delta P_{iousing} + \Delta P_{element}}{P_{element}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ $\frac{\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}}{P_{iousing} + 2P_{element}}$ $\frac{\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}}{P_{iousing} + 2P_{element}} = 57 \text{ par}$	· • 12	Solt 1		(1.00)	16QZ25	.01	39QZ25	.01		KF3
$\frac{1}{100} \frac{1}{100} \frac{1}{200} \frac{1}{300} \frac{1}{400} \frac{1}{500} \frac{1}{100} \frac{1}$	APp	4		the flange	16QPMLZ1	.08	39QPMLZ1	.03		LF1—2"
$160PMLZ10 .04 \qquad 390PMLZ10 .01 \\ 160PMLZ25 .02 \qquad 390PMLZ25 .01 \\ 160PMLZ10 .01 \\ 160PMLZ1$	8		XX	3 4-80 (0.50)	16QPMLZ5	.05	39QPMLZ5	.02		
Image: NotesImage: NotesImage: NotesImage: NotesImage: NotesNotes $\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$ $\Delta P_{\text{filter}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ $\Delta P_{\text{filter}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ $\Delta P_{\text{filter}} = 57 \text{ psi}$	4				16QPMLZ10	.04	39QPMLZ1	0 .01		MLF1
$\frac{by 54.9.}{Viscosity factor: Divide Viscosity by 150 SUS (32 cst).}{Viscosity factor: Divide Viscosity by 150 SUS (32 cst).}$ sp gr = specific gravity Sizing of elements should be based on element flow information provided in the Element Selection chart above. Please note that water has a lower viscosity than 150 SUS fluid and therefore pressure drops for water will be lower. $\frac{\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}}{\text{Exercise:}}$ Determine ΔP at 150 gpm (570 L/min) for SSQLF1516QZ3VF40D9 using 200 SUS (44 cst) fluid. $\frac{Solution:}{\Delta P_{\text{housing}}} = 2 \text{ psi } [.14 \text{ bar}]$ $\Delta P_{\text{element}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ $= [1570 \times (04 \div 52.9) \times (44 \div 32) = 57 \text{ bar}]$	0	100	200 300	400 500	If working in u	.uz nits of bars &	L/min, divide ab	ove factor		SRLT
Sp gr = specific gravity KF8 Sizing of elements should be based on element flow information provided in the Element Selection chart above. KF8 Please note that water has a lower viscosity than 150 SUS fluid and therefore pressure drops for water will be lower. K9 Notes $\Delta P_{filter} = \Delta P_{housing} + \Delta P_{element}$ 2K9 Exercise: Determine ΔP at 150 gpm (570 L/min) for SSQLF1516QZ3VF40D9 using 200 SUS (44 cSt) fluid. QF15 $\Delta P_{housing} = 2 \text{ psi } [.14 \text{ bar}]$ QLF15 SSQLF15 $\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or SSQLF15	0		Flow gpm	400 500	by 54.9. Viscosity factor	r: Divide viscos	ty by 150 SUS (32	cSt).		RLT
Please note that water has a lower viscosity than 150 SUS fluid and therefore pressure drops for water will be lower. K9 Notes $\Delta P_{filter} = \Delta P_{housing} + \Delta P_{element}$ 2K9 Exercise: Determine ΔP at 150 gpm (570 L/min) for SSQLF1516QZ3VF40D9 using 200 SUS (44 cSt) fluid. 3K9 $\Delta P_{housing} = 2 \text{ psi } [.14 \text{ bar}]$ QLF15 $\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ SSQLF15 σ	sp gr = spe Sizing of e	lements s	should be based	l on element flow inforn	nation provided i	n the Elemen	t Selection char	t above.		KF8
Notes $\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$ 2K9Exercise: Determine ΔP at 150 gpm (570 L/min) for SSQLF1516QZ3VF40D9 using 200 SUS (44 cSt) fluid.3K9Solution: $\Delta P_{\text{housing}} = 2 \text{ psi } [.14 \text{ bar}]$ QLF15 $\Delta P_{\text{element}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or $= [570 \times (04 \div 54.9) \times (04 \div 54.9$	Please not	e that wa	iter has a lowe	viscosity than 150 SUS f	luid and therefor	e pressure dr	ops for water w	ill be lower.		К9
NotesExercise: Determine ΔP at 150 gpm (570 L/min) for SSQLF1516QZ3VF40D9 using 200 SUS (44 cSt) fluid.3K9Solution: $\Delta P_{housing} = 2 \text{ psi } [.14 \text{ bar}]$ QF15 $\Delta P_{housing} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or $= [570 \times (.04 \div 54.9) \times (.$					$\Delta \mathbf{P}_{\text{filter}} = \Delta \mathbf{P}_{\text{filter}}$	nousing + $\Delta \mathbf{P}_{e}$	lement			2K9
$\frac{Determine \Delta P \text{ at 150 gpm (5/0 L/min) for}}{SSQLF1516QZ3VF40D9 using 200 SUS (44 cSt) fluid.}$ $\frac{Solution:}{\Delta P_{housing}} = 2 \text{ psi } [.14 \text{ bar}]$ $\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ $r = [570 \times (04 \div 54.9) \times (44 \div 32) = 57 \text{ bar}]$	Notes				Exercise:		(==== + (+ =) (21/0
$\begin{array}{ c c c c c }\hline \hline Solution: & & & & & & & & \\ \hline & & & & & & & \\ \hline & & & &$					SSOLF1516OZ	P at 150 gpn 3VF40D9 usi	n (570 L/min) fe na 200 SUS (44	or 1 cSt) fluid.		3K9
$\Delta P_{\text{housing}} = 2 \text{ psi } [.14 \text{ bar}]$ $\Delta P_{\text{element}} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or $= [570 \times (.04 \div 54.9) \times (.44 \div 32)] = .57 \text{ bar}]$ $SSQLF15$					Solution:		5	,		QF15
$\Delta P_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or = 1570 × (04 ÷ 54.9) × (44 ÷ 32) = .57 \text{ psr}					$\Delta P_{\text{housing}} = 2$	psi [.14 ba	·]			OI F15
$\Delta r_{element} = 150 \times .04 \times (200 \div 150) = 8.0 \text{ psi}$ or $= [570 \times (.04 \div 54.9) \times (.04 \div 32) = 57 \text{ psi}$						50 v 04 v /	-) pci		QUID
$-[570 \times (04 \pm 54.9) \times (44 \pm 32) - 57 \text{ bar}]$					$\Delta r_{element} = 1$	50 x .04 x (4 or	200÷150) = 8.0	, hzi		SSQLF15
= [570 × (.04+54.3) × (44+52) = .57 bar]					= [570 x (.04÷5	54.9) x (44÷32) = .57 bar]		OFD5
$\Delta P_{\text{total}} = 2.0 + 8.0 = 10.0 \text{ psi}$					$\Delta P_{total} = 2$	2.0 + 8.0 = 1	0.0 psi			4.00
or = [.14 + .57 = .71 bar]					c 1 =	or .14 + .57 = 1	71 barl			

SSQLF15 Stainless Steel Base-Ported Filter



NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3, and 4, plus the letter V. *Example*: 16QZ1V
- Box 4. For options W, 150PSV, M25, M60, and M150, Box 3 must equal Q.
- Box 5. All elements for this filter are supplied with Viton seals. Seal designation in Box 5 applies to housing only. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 6. B24, B32 and B40 are supplied with metric mounting holes. F24M, F32M, F40M and F48M are supplied with metric flange mounting holes.

Integral inlet and outlet test points are standard on all models.

In-Line Filter **QFD5**



Features and Benefits

- Duplex filter design
- Approved for API 5L use
- Element changeout from the top minimizes oil spillage
- Available with optional core assembly to accommodate coreless elements
- Offered with standard Q, QPML deep-pleated and QCLQF coreless elements in 16" and 39" lengths with Viton[®] seals as the standard
- Offered in 2" and 3" SAE J518 4-bolt flange Code 61 and ANSI 300# flange porting
- Integral inlet and outlet test points are standard on all models
- WQLF15 model for water service also available
- Various Dirt Alarm[®] options
- Also available in 4, 6 or 8 housing modular designs

Model No. of filter in photograph is QFD516QZ10F48DPG.







AUTOMOTIVE MANUFACTURING



POWER

GENERATION





STEEL MAKING



Flow Rating: Up to 175 gpm (675 L/min) for 2":

TOOL

MOBILE VEHICLES

MINING

TECHNOLOGY



Viton is a registered	KT
trademark of DuPont	
Dow Elastomers.	11

	Applications	Mounted Filters
		PAF1
		MAF1
		MF2
		TF1
		KF3
		LF1—2"
		MLF1
		SRLT
		RLT
IS (32 cSt) fluids	Filter	KF8
	Specifications	К9

Ĵ	350 gpm (1325 L/min) for 3" for 150 SUS (32 cSt) fluids	Housing
Max. Operating Pressure:	500 psi (34.5 bar)	Specifications ^{K9}
Min. Yield Pressure:	Contact factory	2K9
Rated Fatigue Pressure:	Contact factory	
Temp. Range:	-15°F to 200°F (-26°C to 93°C)	3K9
Bypass Setting:	Cracking: 30 psi (2.1 bar) Full Flow: 33 psi (2.3 bar) for 2"; 38 psi (2.6 bar) for 3"	QF15
Porting Base & Cap: Element Case & Transfer Valve	Ductile Iron : Steel	QLF15
Weight of QFD5-16Q: Weight of QFD5-39Q:	410.0 lbs. (186.0 kg) for 2"; 455.0 (206.0 kg) for 3" 562.0 lbs. (255.0 kg) for 2"; 607.0 (275.0 kg) for 3"	QFD5
Element Change Clearance:	16Q 12.00" (305 mm) 39Q 33.80" (859 mm)	





Element Performance	Element		Filtration Rati Using automated part $\beta_x \ge 75$	o Per ISO 4572/NFP ticle counter (APC) calibratics $\beta_x \ge 100$	$\begin{array}{l} \mbox{Filtration Ratio wrt ISO 16889} \\ \mbox{Using APC calibrated per ISO 11171} \\ \mbox{$\beta_x(c) \geq 200$} \\ \mbox{$\beta_x(c) \geq 1000$} \end{array}$		
information		Z1/CLQFZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
		Z3/CLQFZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	16Q	Z5/CLQFZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
		Z10/CLQFZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
		Z25/CLQFZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0
		Z1/CLQFZ1/PMLZ1	<1.0	<1.0	<1.0	<4.0	4.2
		Z3/CLQFZ3/PMLZ3	<1.0	<1.0	<2.0	<4.0	4.8
	39Q	Z5/CLQFZ5/PMLZ5	2.5	3.0	4.0	4.8	6.3
		Z10/CLQFZ10/PMLZ10	7.4	8.2	10.0	8.0	10.0
		Z25/CLQFZ25/PMLZ25	18.0	20.0	22.5	19.0	24.0

Dirt Holding	Ele	ment	DHC (gm)	Element	DHC (gm)	Element	DHC (gm)	
Capacity		Z1	276	CLQFZ1	307	PMLZ1	307	
		Z3	283	CLQFZ3	315	PMLZ3	315	
	16Q	Z5	351	CLQFZ5	364	PMLZ5	364	
		Z10	280	CLQFZ10	306	PMLZ10	330	
		Z25	254	CLQFZ25	278	PMLZ25	299	
		Z1	974	CLQFZ1	1259	PMLZ1	1485	
		Z3	1001	CLQFZ3	1293	PMLZ3	1525	
	39Q	Z5	954	CLQFZ5	1302	PMLZ5	1235	
		Z10	940	CLQFZ10	1214	PMLZ10	1432	
		Z25	853	CLQFZ25	1102	PMLZ25	1299	
Element Collapse Rating: Flow Direction: Element Nominal Dimensions:			Q and QPML: 150 psid (10 bar), QCLQF: 100 psid (7 bar) Outside In 16Q: 6.0" (150 mm) O.D. x 16.85" (430 mm) long 16QCLQF: 6.0" (150 mm) O.D. x 18.21" (463 mm) long 16QPML: 6.0" (150 mm) O.D. x 16.00" (405 mm) long 39Q: 6.0" (150 mm) O.D. x 38.70" (985 mm) long 39QCLQF: 6.0" (150 mm) O.D. x 40.01" (1016 mm) long 39QPML: 6.0" (150 mm) O.D. x 37.80" (960 mm) long					



	٦	ype Fluid	Appropriate Schroed	er Media				_	Fluid	ST
Petro	leum Ba	sed Fluids	All E (cellulose) and Z (synthetic) n	nedia			_	Compatibility	SKB
Πιζ	Invert	Free Free Free Free Free Free Free Free	All Z (synthetic) media 10 and 25 µ 7 (synthet	ic) media				_		Housings
	Wat	er Glycols	3, 5, 10 and 25 μ Z (synthet	nthetic) me	edia			_		MTA
	Phosph	ate Esters	All Z (synthetic) media	with H (EP	R) seal designat	ion				NTD
										IVITB
										ZT
		lement	Element selection	are predic	ated on the use	of 150 SUS	5 (32 cSt)		Element	КТ
Pressure	Series	Part No.	petroleum based f	uid and 3"	flange porting v 39071	with a 30 ps	5i (2.1 bar) l	oypass.	Selection	
		16 & 39QZ3	10021	16QZ3	33021		39QZ3		Based on	RT
		16 & 39QZ5		16QZ5	/10		39QZ5		Flow Rate	RTI
		16 & 39QZ25		16Q	Z25 & 39QZ25		550210	,		
То		16 & 39QCLQFZ	1 16QCLQFZ1		39QCLQFZ	1 2000	0572			KFI
500 psi	Z	16 & 39QCLQFZ	5 160	CLQFZ5		39QCL 39QCL	QFZ5 QFZ5			LRT
(35 bar)	ivieula	16 & 39QCLQFZ	10 1	6QCLQFZ10)	390	QCLQFZ10	705		RET
		16 & 39QCLQFZ	16QPMLZ1		39QPMLZ1		39QCLQF	225		DIT
		16 & 39QPMLZ3	160	PMLZ3		39QPI	MLZ3			QT
		16 & 39QPMLZ	0	16QPMLZ1	0	390PT	QPMLZ10	_		КТК
		16 & 39QPMLZ2	5	1	16QPMLZ25		1			
	Flow	gpm	0	20	0	3	00	350		LTK
Chause ala		(L/min)	0 50)0 hausing	1	000				Accessories
Note: Con Applicati	ntact fac ons. For	tory regarding more informat	use of E Media in Hig ion, refer to Fluid Co	h Water C npatibility	ontent, Invert v: Fire Resistant	Emulsion a Fluids, pa	and Water iges 19 an	[.] Glycol d 20.		for Tank- Mounted Filters
۸ D				ΔΡ.					Droccuro	PAF1
	for	fluids with sp c	r = 0.86'			nt AP facto	r x viscosit	v factor	Drop	MAF1
Q. 20 L.	Flow	(L/min)		$FI \Lambda P f$	actors @ 150 SU	(32 cSt)	1 X VI3CO3IU		Information	1450
20	(200)	(500)		16QZ1	.09	39QZ	1	.03	Based on	IVIF2
16			.00)	16QZ3 16QZ5	.04 .04	39QZ 39QZ	23 25	.01 .01	Flow Rate	TF1
		CURATION -	ΔP (bar)	16QZ10 16QZ25	.03 .01	39QZ 39QZ	210 225	.01 .01	and viscosity	KF3
4		SNITE SIZING ((.50)	16QCL0	CFZ1 .07	39QC	LQFZ1	.03		
0		2" []		16QCLC	QFZ5 .05	39QC	LQFZ5	.02		LF1—2"
0	Flov	/ gpm (200)	low (L/min)	16QCLC 16QCLC	QFZ10 .04 QFZ25 .03	39QC 39QC	LQFZ10	.01 .01		MLF1
		14 (200)		16QPM	LZ1 .08	39QP	MLZ1	.03		CDIT
		10	(0.75)	16QPM	LZ5 .05	39QP	MLZ5	.02		JULI
			(0.5)	16QPM 16QPM	LZ10 .04 LZ25 .02	39QP 39QP	MLZ10 MLZ25	.01 .01		RLT
		4	(0.25)	If working	ng in units of bar	s & L/min, d	livide above	e factor		KF8
		0 50	150 250 350	Viscosity	<i>y factor:</i> Divide vi	scosity by 150) SUS (32 cSt).		
sp gr = spe Sizing of e	ecific grav elements :	vity should be based	prow gpm on element flow inform	ation provi	ded in the Eleme	ent Selectio	n chart abo	ove.		K9
_				$\Delta \mathbf{P}_{\text{filter}} =$	$\Delta \mathbf{P}_{housing} + \Delta \mathbf{I}$	element				2K9
Notes				Exercise:						3K9
				Determi QFD5160	ne ∆P at 150 gp)Z3VF48D5 usin	om (570 L/r g 200 SUS	nin) for (44 cSt) f	uid.		OF15
				Solution	<u>ı:</u>					
				$\Delta P_{housing}$	g = 2.5 psi [.17	bar]				QLF15
				ΔP_{elemen}	_t = 150 x .04 x	(200÷150)) = 8.0 psi			SSQLF15
					or = [570 x (.04·	÷54.9) x (4	14÷32) = .	57 bar]		QFD5
				ΔΡ	= 2.5 + 8.0 =	10.5 psi				
				total	Or	71 harl				
					= [. / + .) / =	+ ng[]				





BOX 6

Por	Bypass Setting	
F32 = 2" SAE 4-bolt flange Code 61 F32M = 2" SAE 4-bolt flange Code 61 FA32 = 2" ANSI 300# flange	F48 = 3" SAE 4-bolt flange Code 61 F48M = 3" SAE 4-bolt flange Code 61 FA48 = 3" ANSI 300# flange	Omit = 30 psi cracking 50 = 50 psi cracking X = Blocked bypass

BOX 7

BOX 8

Dirt Alarm [®] Options		
	Omit = None	
Visual	DPG = Standard differential pressure gauge D5 = Visual pop-up D5C = D5 in cap	
Visual with Thermal Lockout	D8 = Visual w/ thermal lockout D8C = D8 in cap	
Electrical	MS5 = Electrical w/ 12 in. 18 gauge 4-conductor ca MS5LC = Low current MS5 MS10 = Electrical w/ DIN connector (male end only) MS10LC = Low current MS10 MS11 = Electrical w/ 12 ft. 4-conductor wire MS12 = Electrical w/ 12 ft. 4-conductor wire MS12LC = Low current MS12 MS15DC = Electrical, direct current normally open, for MS15DCNC = Electrical, direct current normally closed, fo MS16LC = Low current MS16 MS16LC = Low current MS16 MS16LC = Low current MS16	ble (male end only) DC use only r DC use only tor ector
Electrical with Thermal Lockout	MS5T = MS5 (see above) w/ thermal lockout MS5LCT = Low current MS5T MS10T = MS10 (see above) w/ thermal lockout MS10LCT = Low current MS10T MS12T = MS12 (see above) w/ thermal lockout MS16LCT = Low current MS12T MS16T = MS16 (see above) w/ thermal lockout MS16LCT = Low current MS16T MS17LCT = Low current MS17T	
Electrical Visual	MS13 = Supplied w/ threaded connector & light MS14 = Supplied w/ 5 pin Brad Harrison connector	& light (male end)
Electrical Visual with Thermal Lockout	MS13DCT = MS13 (see above), direct current, w/ therma MS13DCLCT = Low current MS13DCT MS14DCT = MS14 (see above), direct current, w/ therma MS14DCLCT = Low current MS14DCT	al lockout al lockout

NOTES:

- Box 2. Replacement element part numbers are a combination of Boxes 2, 3 and 4, plus the letter V. *Example*: 16QZ1V
- Box 3. QCLQFZ are coreless elements – housing includes rigid metal core. QPML are deep-pleated elements with more media and higher dirt holding capacity.
- Box 4. For option W, Box 3 must equal Q.
- Box 5. All elements for this filter are supplied with Viton seals. Seal designation in Box 5 applies to housing only. Viton is a registered trademark of DuPont Dow Elastomers.
- Box 6. F32M and F48M are supplied with metric flange mounting holes.

Integral inlet and outlet test points are standard on all models.