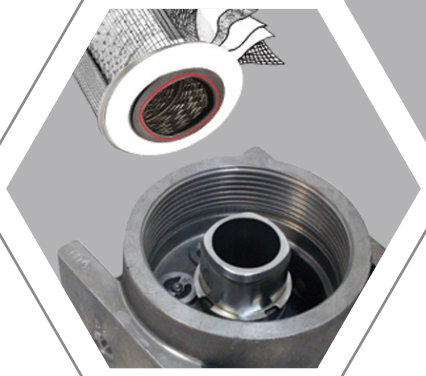
QUALITY PROTECTION



Schroeder INDUSTRIES
Advanced Fluid Conditioning Solutions®

QUALITY PROTECTION CATALOG

Schroeder Industries

Introduction

About Schroeder Industries

Schroeder Industries is a family company of 76 years which manufactures, designs, and markets a complete range of Advanced Fluid Conditioning Solutions®. Headquartered in Leetsdale, PA, we are in the heart of manufacturing country.

Schroeder Brothers Corporation was founded after Bill Schroeder returned from WW2. Bill wrote a letter to his brother Jack, a young engineer, describing an opportunity to distribute an important new product to the mining industry. In the letter, Bill explained that he believed they could build a business around this technology.

Schroeder Brothers Corporation grew rapidly, adding additional mining products and eventually becoming the largest mining equipment distributor in the Appalachia's. Over time, Schroeder began to manufacture hydraulic systems and components for the mines. The systems came first, and with the systems came issues related to contamination.

To this day, underground mining is still one of the most difficult hydraulic system operating environments. With his system experience, Bill realized that there was a critical need for high efficiency filtration. Together with his brothers Jack & Reed, Bill pioneered the development of many hydraulic and lubrication filtration concepts, products, and standards that are still the benchmarks of performance today. Time continued to march on, and Schroeder's business continued to evolve further into a manufacturing company.

Today, Schroeder Industries serves almost every market where high efficiency fluid filtration is required. Our Advanced Fluid Conditioning Solutions® are forged through the real-world experience gained in the world's toughest operating environments.

Mission Statement

Our success is a product of customer-driven innovation and technically advanced fluid conditioning products and services, in which our people deliver value to our stakeholders, communities and environment.

Quality Policy

Continuous improvement in our business to ensure a quality product, shipped on time, without compromise.

Vision

To be the global leader of engineered, fluid conditioning products & services.

Core Values (F.I.L.T.E.R.S)

- **Fueled:** By the success of our customer.
- **Ingenuity:** Engineered solutions for a complex environment.
- **Lead by example:** Better every day through continuous improvement.
- **Together:** We excel through clear communication & teamwork.
- **Empowering:** Employees to provide exceptional quality & service.
- **Responsiveness:** With determination, we make it happen.
- **Safety:** We pride ourselves on a safe, fun & family-oriented work environment.

Introduction to Quality Protection	5
What is Quality Protection?	5
Quality Protection Means	5
Why do my end users need Quality Protection?	5
How To Use: New Model Codes	6
Old Model Code	6
New Model Code	6
Quality Protection Designs	7
GeoSeal® | Patented Quality Protection	7
HydraSPIN Filters	7
Lock & Key	7
Section 1: Base Ported Pressure Filters	8
GKF30/GKF50	9
GKC50	11
GMKF50	13
GKC65	15
GK9	17
G2K9	19
G3K9	21
Section 2: Top Ported Filters	24
GH	25
GKF5	27
GKF3	29
GKL3	31
GMLF1	33
NFLK30	35
Section 3: Tank Mounted Filters	36
AFT	39
GPT	41
BRT	43
TRT	45
GZT	47
GRT	49
GRTB	51
GLRT	53
Appendix A: Indicators	57

Contents at a Glance

		Pressure psi (bar)	Flow gpm (L/min)	Page
Section 1	**Base Ported Filters**			
	GKF30/GKF50	3000-5000 (210-345)	100/150 (380/570)	9
	GKC50	5000 (345)	100/150 (380/570)	11
	GMKF50	5000 (345)	200 (760)	13
	GKC65	6500 (450)	100 (380)	15
	GK9	900 (100)	100/150 (380/570)	17
	G2K9	900 (100)	100/150 (380/570)	19
	G3K9	900 (100)	100/150 (380/570)	21

		Pressure psi (bar)	Flow gpm (L/min)	Page
Section 2	**Top Ported Filters**			
	GH	500 - 725 (35 - 50)	35 - 112 (130-425)	25
	GKF5	500 (100)	100/150 (380/570)	27
	GKF3	300 (100)	100/150 (380/570)	29
	GKL3	300 (120)	100/150 (380/570)	31
	GMLF1	300 (20)	200 (760)	33

		Pressure psi (bar)	Flow gpm (L/min)	Page
Section 3	**Tank Mounted Filters**			
	AFT	100 (7)	40 (151)	37
	BRT	145 (10)	160 (600)	39
	TRT	145 (10)	100 (400)	41
	GZT	100 (7)	40 (150)	43
	GRT	100 (7)	100 (380)	45
	GRTB	100 (7)	100 (380)	47
	GLRT	100 (7)	150 (570)	49

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Quality Service Integrity at Schroeder Industries

What is Quality Protection?

Far too often, customers make purchasing decisions based solely on price, only to be extremely disappointed with the poor quality delivered by low-cost imitations. To make the matter worse, the customer often points an accusing finger at the filter housing manufacturer for poor performance, rather than the inadequate element they used as a replacement. That is where Quality Protection is the answer.

Quality Protection Means:

- End users cannot use “will-fit”, low quality elements
- OEM’s will capture aftermarket revenue; exponential growth year over year
- An increase in machine productivity and reliability
- Overall reduction in warranty claims
- Peace of Mind!

QUALITY PROTECTION =

Schroeder KZ5

“Will-Fit” K-series

Why Should I Use Quality Protection?

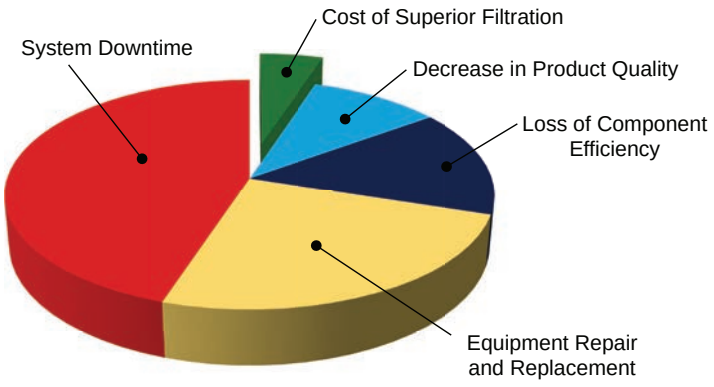
If you’ve ever experienced downtime with your hydraulic equipment, you know how costly and frustrating it can be. Just because you have a filter in place, it doesn’t mean that you are capturing the particulate that prevents your equipment from performing at the level it should be at. Cut-rate imitations may claim that “All filtration elements are guaranteed to meet or surpass all specifications of the original equipment manufacturer” but that’s not always the case. Take a look at the numbers below and see for yourself:

Elements	Schroeder KZ5	“Will-Fit” replacement
# of pleats	80	71
Pleat Height (in)	0.63	0.61
Media Layers	6	5
DHC (g)	119	84.3
Beta 200	4.8	12.2
Beta 1000	6.3	18.1

Elements	Schroeder 27KZ1	“Will-Fit” replacement
# of pleats	80	71
Pleat Height (in)	0.63	0.61
Media Layers	6	5
DHC (g)	378.1	233.1
Beta 200	<4	12.4
Beta 1000	<4	18.3

Why do my users need Quality Protection?

Hydraulic system downtime and repairs represent a significant portion of overall costs to end users. As much as 70% of all premature machine failures can be attributed to contamination (ref. NORIA Corp.). Adding in superior filtration to your end user’s hydraulic system will help prevent premature machine failures and keep uncontrolled contamination effects from occurring. Here is a graph that shows the average percentage of costs per uncontrolled contamination effect versus the cost of superior filtration:



How To: Use Model Codes

New Model Code

Merging certain deciding factors together from our previous model codes, the new examples will have fewer boxes and make for a more streamlined creative process. Each row is its own category, while inside of that row, the columns are the different breakdowns within that selection. From left to right, there will be several options to choose from for each breakdown. Footnotes will be included in each model code.

Look out for footnotes for certain categories. They will be numbered consecutively and listed below each model code. Example below.

How to Build a Valid Model Number for a Schroeder GK530/GKF50:

GKF30/GKF50

2	–	KGZ5	–	S	–	MS16LC	–	
Bowl Length		Element		Porting/Test Points		Indicator		Options

GKF30/GKF50

Start Here

2 Bowl Length

KGZ5 Element

S Porting/Bypass/ Test Points

MS16LC Indicator

Omit Options

Bowl Length

1 =	9"/18"/27" Bowl with one (1) element
2 =	18" Bowl with two (2) 9" elements
3 =	27" Bowl with three (3) 9" elements

Element

Note: Element code can also be used to build a replacement element.

Element		Media		Micron Rating		Seals	
KG	(9", 18", or 27" Bowl)	Z =	Excellement Z-Media (Synthetic)	1 =	1µ (Z, ZW Media)	Omit =	Buna
KKG	(18" Bowl)	Omit =	E Media (Cellulose)	3 =	3µ (E, Z, AS, ZW Media)	V =	Viton
27KG	(27" Bowl)	AS =	Anti-Stat Media (Synthetic)	5 =	5µ (Z, AS, ZW Media)		
		ZW =	Aqua-Excellement ZW Media	10 =	10µ (E, Z, AS, ZW, ED Media)		
		W =	W Media (Water Removal)	25 =	25µ (E, Z, ZW Media)		
		ED =	Electic Drive Media	Omit =	(W Media Only)		

Porting/Test Points

Porting		Bypass		Test Points	
P =	1-1/2" NPTF	Omit =	40 PSI	Omit =	None
P32 =	2" NPTF	50 =	50 PSI	L =	Two 1/4" NPTF inlet & outlet female test ports
S =	SAE-24	60 =	60 PSI	U =	Series 1215 7/6 UNF Test Point in cap (upstream)
F =	1-1/2" SAE 4-bolt flange (KF30 Code 61)(KF50 Code 62)			UU =	Series 1215 7/16 UNF Test Point in block (upstream & downstream
F32 =	2" SAE 4-bolt flange Code 61(KF30) *KF30 Only				
O =	Subplate				
B24 =	ISO 228 G-1-1/2				

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12" 4-Conductor Cable	Omit = None	Omit = None (All except MS18 & MS19)
MS10 = Male DIN Connector	LC = Low Current	NO = Normally Open (Only MS18 & MS19)
MS12 = Male 5 Pin Brad Harrison Connector	T = Thermal Lockout	NC = Normally Closed (Only MS18 & MS19)
MS16 = Weather Packed Seal Connector	LCT = Low Current with Thermal Lockout	
MS17 = Male Micro 4 Pin Brad Harrison Connector		
MS18 = 2 Pin Amp Junior Power Timer Connector		
MS19 = 2 Pin Deutsch Connector		

MS11 = 12 ft 4-Conductor Cable
MS15DC = 3000 PSI max #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	Omit = None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	LC = Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	T = Thermal Lockout
	LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D = Pointer	D8 = Visual with Thermal Lockout
D5 = Latching Visual Pop-Up	D10 = Non-Latching Indicator
D5AS = Latching Visual Pop-Up with aluminum shroud	D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

Omit =	None
C =	Indicator in cap
G509 =	Dirt alarm and drain opposite standard
G588 =	Electric Switch and drain opposite standard

Quality Protection Designs

GeoSeal® | Patented Quality Protection
US Patent D658740

GeoSeal® is a patented offering from Schroeder that provides a unique way for OEMs to retain replacement element business and to keep a filter's performance at the level that it was supplied. The critical sealing arrangement between a filter housing and its replacement element takes on a shape other than the standard circular arrangement, which prevents the use of imitation elements. Specifically, the element grommet & mating bushing are given a new geometric shape.

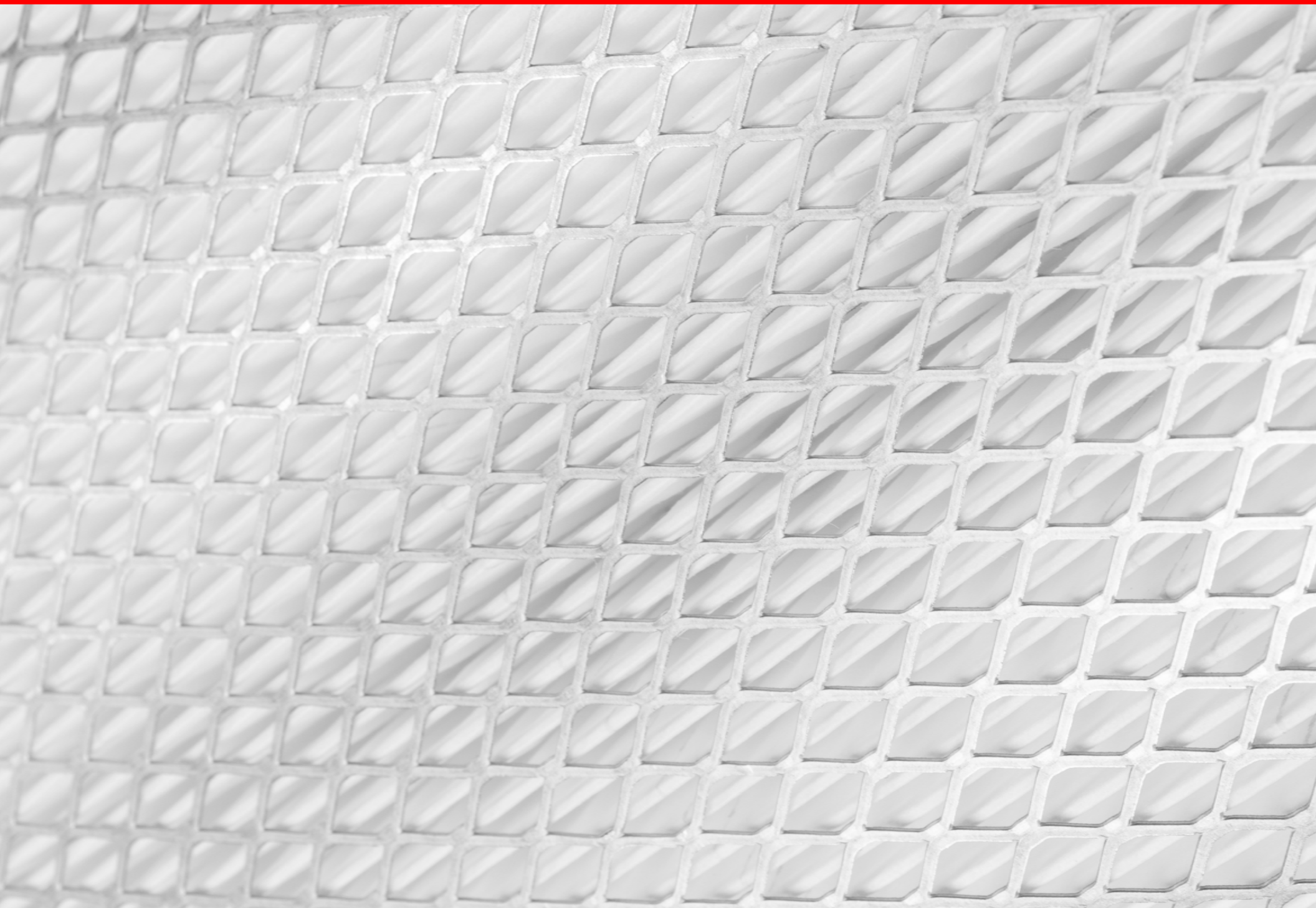
GH6, GH9, GH11, & GH14 HydraSPIN Filters
US Patent US 9126129 and US 8550255

The Schroeder GH HydraSPIN filters offer a unique and proprietary bowl to element seal that minimizes potential leakage points by the use of one seal on the element. The GH HydraSPIN cartridge style elements are also patented with integrated bypass valve features. The filter housing has mounting interchangeability with competitor filter heads and the assembly is capable of delivering the best performance in hydrostatic or CVT applications.

Lock & Key
Patent Pending

Our Lock & Key technology is a patented offering from Schroeder that provides a unique interface between the bushing and the element in some filter housings. This interface takes on a specific shape that only a specific "Lock and Key" pattern will allow the element to seal correctly. This patent protected design that can be customizable to specific OEM requirements.

Section 1: BASE PORTED FILTERS



Base-Ported Pressure Filter

GKF30/GKF50 | **GKF30-3000 psi** - *210 bar* | **GKF50-5000 psi** - *345 bar* | 100/150 gpm - *380/570 L/min*

Features and Benefits

- Base-ported pressure filter
- Can be installed in vertical or horizontal position
- HF4 Footprint filter with patented Quality Protection Element
- Element changeout from top minimizes oil spillage
- Offered in pipe, SAE straight thread, flanged and ISO 228 porting
- Integral inlet and outlet female test points option available
- Offered in conventional subplate porting
- Double and triple stacking of KG-size elements can be replaced by single, KKG, or 27KG-size elements

Model No. of filter in photograph is GKF30/GKF501KGZ10SD.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids With 2" porting only, up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	GKF30- 3000 psi (210 bar) GKF50- 5000 psi (345 bar)
Min. Yield Pressure:	GKF30- 12,000 psi (830 bar), per NFPA T2.6.1 GKF50- 15,000 psi (1025 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	GKF30- 2500 psi (170 bar), per NFPA T2.6.1-2005 GKF50- 3500 psi (240 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 61 psi (4.2 bar)
Porting Base & Cap: Element Case:	Ductile Iron Steel
Weight of GKF30-1KG: Weight of GKF30-2KG: Weight of GKF30-3KG: Weight of GKF50-1KG: Weight of GKF50-2KG: Weight of GKF50-3KG:	48 lbs. (22 kg) 65 lbs. (30 kg) 81 lbs. (37 kg) 59.7 lbs. (27.1 kg) 80.7 lbs. (36.6 kg) 102.0 lbs. (46.3 kg)
Element Change Clearance:	8.50" (215 mm) for 1KG; 17.50" (445 mm) for KKG; 26.5" (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder GKF30/GKF50:

GKF30/GKF50 [ ] – [ ] – [ ] – [ ] – [ ]

Bowl Length | Element | Porting/Test Points | Indicator | Options

Bowl Length

1 = 9"/18"/27" Bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9" elements

Element

Note: Element code can also be used to build a replacement element.

Element	Media	Micron Rating	Seals
KG (9", 18", or 27" Bowl)	**Z =** Excellement Z-Media (Synthetic)	**1 =** 1µ (Z, ZW Media)	**Omit =** Buna
KKG (18" Bowl)	**Omit =** E Media (Cellulose)	**3 =** 3µ (E, Z, AS, ZW Media)	**V =** Viton
27KG (27" Bowl)	**AS =** Anti-Stat Media (Synthetic)	**5 =** 5µ (Z, AS, ZW Media)	
	ZW = Aqua-Excellement ZW Media	**10 =** 10µ (E, Z, AS, ZW, ED Media)	
	W = W Media (Water Removal)	**25 =** 25µ (E, Z, ZW Media)	
	ED = Electic Drive Media	**Omit =** (W Media Only)	

Porting/Test Points

Porting

P = 1-1/2" NPTF
P32 = 2" NPTF
S = SAE-24
F = 1-1/2" SAE 4-bolt flange (KF30 Code 61)(KF50 Code 62)
F32 = 2" SAE 4-bolt flange Code 61(KF30) *KF30 Only
O = Subplate
B24 = ISO 228 G-1-1/2

Bypass

Omit = 40 PSI
50 = 50 PSI
60 = 60 PSI

Test Points

Omit = None
L = Two 1/4" NPTF inlet & outlet female test ports
U = Series 1215 7/6 UNF Test Point in cap (upstream)
UU = Series 1215 7/16 UNF Test Point in block (upstream & downstream

Indicator[1]

Omit = None

Electrical Indicator

MS5 = 12" 4-Conductor Cable
MS10 = Male DIN Connector
MS12 = Male 5 Pin Brad Harrison Connector
MS16 = Weather Packed Seal Connector
MS17 = Male Micro 4 Pin Brad Harrison Connector
MS18 = 2 Pin Amp Junior Power Timer Connector
MS19 = 2 Pin Deutsch Connector

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

Normally Open/Closed

Omit = None (All except MS18 & MS19)
NO = Normally Open (Only MS18 & MS19)
NC = Normally Closed (Only MS18 & MS19)

MS11 = 12 ft 4-Conductor Cable
MS15DC = 3000 PSI max #8-32 Post for Wire Connection

Electrical Visual Indicator

MS13DC = Threaded Connector and Light (Direct Current)
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

Omit = None
C = Indicator in cap
G509 = Dirt alarm and drain opposite standard
G588 = Electric Switch and drain opposite standard

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Base-Ported Pressure Filter

GKC50 | **5000 psi** - *345 bar* | 100/150 gpm - *380/570 L/min*

Features and Benefits

- Base-ported pressure filter
- Patented dirt-tolerant cap design
- Can be installed in vertical or horizontal position
- HF4 Footprint filter with patented Quality Protection element
- Element changeout from top minimizes oil spillage
- Offered in pipe, SAE straight thread, flanged and ISO 228 porting
- Integral inlet and outlet female test points option available
- Offered in conventional subplate porting
- Double and triple stacking of KG-size elements can be replaced by single, KKG, or 27KG-size elements

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids With 2" porting only, up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	5000 psi (345 bar)
Min. Yield Pressure:	15,000 psi (1035 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	3500 psi (240 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 61 psi (4.2 bar)
Porting Base & Cap: Element Case:	Ductile Iron Steel
Weight of GKF30-1KG: Weight of GKF30-2KG: Weight of GKF30-3KG:	66.8 lbs. (30.3 kg) 87.8 lbs. (39.8 kg) 109.6 lbs. (49.7 kg)
Element Change Clearance:	8.50" (215 mm) for 1KG; 17.50" (445 mm) for KKG; 26.5" (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder GKFC50:

GKC50		–		–		–		–	
	Bowl Length		Element		Porting/Test Points		Indicator		Options

Bowl Length

1 = 9"/18"/27" Bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9"elements

Element

Note: Element code can also be used to build a replacement element.

Element

KG (9", 18", or 27" Bowl)
KKG (18" Bowl)
27KG (27" Bowl)

Media

Z = Excellement Z-Media (Synthetic)
Omit = E Media (Cellulose)
AS = Anti-Stat Media (Synthetic)
ZW = Aqua-Excellement ZW Media
W = W Media (Water Removal)
ED = Electic Drive Media

Micron Rating

1 = 1µ (Z, ZW Media)
3 = 3µ (E, Z, AS, ZW Media)
5 = 5µ (Z, AS, ZW Media)
10 = 10µ (E, Z, AS, ZW, ED Media)
25 = 25µ (E, Z, ZW Media)
Omit = (W Media Only)

Seals

Omit = Buna
V = Viton

Porting/Test Points

Magnet

Omit = None
M = Magnet Inserts *(Not available with indicator in cap)*

Porting

P = 1-1/2" NPTF
P32 = 2" NPTF
S = SAE-24
F = 1-1/2" SAE 4-Bolt flange (code 62)
O = Subplate
B24 = ISO 228 G-1-1/2

Bypass

Omit = 40 PSI
50 = 50 PSI

Test Points

Omit = None
L = Two 1/4" NPTF female test ports
U = Series 1215 7/16 UNF Test Point installed in cap (upstream)
UU = Series 1215 7/16 UNF Test Point installed in block (upstream and downstream)

Indicator[1]

Omit = None

Electrical Indicator

MS5 = 12" 4-Conductor Cable
MS10 = Male DIN Connector
MS12 = Male 5 Pin Brad Harrison Connector
MS16 = Weather Packed Seal Connector
MS17 = Male Micro 4 Pin Brad Harrison Connector
MS18 = 2 Pin Amp Junior Power Timer Connector
MS19 = 2 Pin Deutsch Connector

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

Normally Open/Closed

Omit = None (All except MS18 & MS19)
NO = Normally Open (Only MS18 & MS19)
NC = Normally Closed (Only MS18 & MS19)

MS11 = 12 ft 4-Conductor Cable

Electrical Visual Indicator

MS13DC = Threaded Connector and Light (Direct Current)
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

Omit = None
G509 = Dirt Alarm and drain opposite standard
G588 = Electric Switch and drain opposite standard

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Base-Ported Pressure Filter

GMKF50 | **5000 psi** - *345 bar* | 200 gpm - *760 L/min*

Features and Benefits

- Base-ported high pressure dual filter manifold mounted
- HF4 Footprint filter with patented Quality Protection element
- Element changeout from top minimizes oil spillage
- Offered in pipe porting
- Integral inlet and outlet female test points option available

Model No. of filter in photograph is GMKF50KG21PD5

Filter Housing Specifications

Flow Rating:	Up to 200 gpm (760 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	5000 psi (345 bar)
Min. Yield Pressure:	15,000 psi (1035 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	3500 psi (240 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 61 psi (4.2 bar)
Porting Base & Cap: Element Case:	Ductile Iron Steel
Weight of GMKF50-2KG: Weight of GMKF50-4KG: Weight of GMKF50-6KG: Weight of GMKC50-2KG: Weight of GMKC50-4KG: Weight of GMKC50-6KG:	214.0 lbs. (97.3 kg) 243.0 lbs. (110.2 kg) 284.4 lbs. (129.0 kg) 216.0 lbs. (98.0 kg) 245.0 lbs. (111.1 kg) 286.4 lbs. (129.9 kg)
Element Change Clearance:	8.50” (215 mm) for 1KG; 17.50” (445 mm) for KKG; 26.5” (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder GMKF50:

GMKF50 – [Bowl Length] – [Element] – [Porting/Test Points] – [Indicator] – [Options]

Bowl Length

2 = 9”/18”/27” bowl with one (1) element in each bowl
4 = 18” Bowl with two (2) 9” elements in each bowl
6 = 27” Bowl with three (3) 9” elements in each bowl

Element

Note: Element code can also be used to build a replacement element.

Element

KG (9", 18", or 27" Bowl)
KKG (18" Bowl)
27KG (27" Bowl)

Media

Z = Excellement Z-Media (Synthetic)
Omit = E Media (Cellulose)
AS = Anti-Stat Media (Synthetic)
ZW = Aqua-Excellement ZW Media
W = W Media (Water Removal)
ED = Electic Drive Media

Micron Rating

1 = 1µ (Z, ZW Media)
3 = 3µ (E, Z, AS, ZW Media)
5 = 5µ (Z, AS, ZW Media)
10 = 10µ (E, Z, AS, ZW, ED Media)
25 = 25µ (E, Z, ZW Media)
Omit = (W Media Only)

Seals

Omit = Buna
V = Viton

Porting/Test Points

Porting

P = 2-1/2" NPTF
F40 = 2-1/2” SAE 4-bolt flange code 62
F32 = 2” SAE 4-bolt flange code 62
P32 = 2” NPTF
B32 = ISO 228 G-2”

Bypass

Omit = None
50 = 50 PSI

Test Points

Omit = None
L = Two 1/4" NPTF inlet & outlet female test ports
U = Series 1215 7/6 UNF Test Point in cap (upstream)

Indicator[1]

Omit = None

Electrical Indicator

MS5 = 12” 4-Conductor Cable
MS10 = Male DIN Connector
MS12 = Male 5 Pin Brad Harrison Connector
MS16 = Weather Packed Seal Connector
MS17 = Male Micro 4 Pin Brad Harrison Connector
MS18 = 2 Pin Amp Junior Power Timer Connector
MS19 = 2 Pin Deutsch Connector

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

Normally Open/Closed

Omit = None (All except MS18 & MS19)
NO = Normally Open (Only MS18 & MS19)
NC = Normally Closed (Only MS18 & MS19)

MS11 = 12 ft 4-Conductor Cable

Electrical Visual Indicator

MS13DC = Threaded Connector and Light (Direct Current)
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2” Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

Omit = None
C = Indicator in Cap

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it’s visual you will use the visual column and that will complete this box. If it’s electrical you will populate the column under “MS = Electrical.” If no indicator is required you will omit the whole section and move onto the next section**

Base-Ported Pressure Filter

GKC65 | **6500 psi** - *450 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Base-ported high pressure filter
- Patented dirt-tolerant cap design
- Can be installed in vertical or horizontal position
- HF4 Footprint filter with patented Quality Protection element
- Element changeout from top minimizes oil spillage
- Offered in flanged porting
- Integral inlet and outlet female test points option available
- Double and triple stacking of K-size element can be replaced by single, KKG. or 27KG-size element

Model No. of filter in photograph is GKC651KG10FD9.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	6500 psi (450 bar)
Min. Yield Pressure:	19,500 psi (1345 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	5000 psi (345 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 75 psi (5.2 bar)
Porting Base & Cap: Element Case:	Ductile Iron Steel
Weight of GKC65-1KG: Weight of GKC65-2KG: Weight of GKC65-3KG:	80 lbs. (36.3 kg) 102 lbs. (46.3 kg) 124 lbs. (56.3 kg)
Element Change Clearance:	8.50” (215 mm) for 1KG; 17.50” (445 mm) for KKG; 26.5” (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder GKC65:

GKC65 [ ] – [ ] – [ ] – [ ] – [ ]

Bowl Length – Element – Porting/Test Points – Indicator – Options

Bowl Length

1 = 9"/18"/27" bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9" elements

Element

Note: Element code can also be used to build a replacement element.

Element

KG (9", 18", or 27" Bowl)
KKG (18" Bowl)
27KG (27" Bowl)

Media

Z = Excellement Z-Media (Synthetic)
Omit = E Media (Cellulose)
AS = Anti-Stat Media (Synthetic)
ZW = Aqua-Excellement ZW Media
W = W Media (Water Removal)
ED = Electic Drive Media

Micron Rating

1 = 1µ (Z, ZW Media)
3 = 3µ (E, Z, AS, ZW Media)
5 = 5µ (Z, AS, ZW Media)
10 = 10µ (E, Z, AS, ZW, ED Media)
25 = 25µ (E, Z, ZW Media)
Omit = (W Media Only)

Seals

Omit = Buna
V = Viton

Porting/Test Points

Porting

F = 1-1/2" SAE 4-Bolt Flange Code 62

Bypass

Omit = 40 PSI
50 = 50 PSI

Test Points

Omit = None
L = Two 1/4" NPTF inlet and outlet female test ports
U = Series 1215 7/16 UNF Schroeder Check Test Point installed in cap (upstream)
UU = Series 1215 7/16 UNF Schroeder Check Test Point installed in block (upstream and downstream)

Indicator[1]

Omit = None

Electrical Indicator

MS5SS = 12" 4-Conductor Cable
MS5SSLC = Low current MS5SS
MS5SST = MS5SS with thermal lockout
MS10SS = Male DIN Connector
MS10SSLC = Low current MS10SS
MS11SS = 12 ft 4-Conductor Cable
MS12SS = Male 5 Pin Brad Harrison Connector
MS12SSLC = Low current MS12SS
MS16SS = Weather Packed Seal Connector
MS16SST = MS16SS with thermal lockout
MS17SSLC = Low current MS17SS
MS17SSLCT = Low current MS17SS with thermal lockout
MS19SSNC = 2 Pin Deutsch Connector (Normally Closed)

Electrical Visual Indicator

MS13SSDC = Threaded Connector and Light (Direct Current)
MS13SSDCLC = Low current MS13SSDC
MS13SSDCT = MS13SSDC with thermal lockout
MS14SSDC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)
MS14SSDCLC = Low current MS14SSDC
MS14SSDCT = MS14SSDC with thermal lockout
MS14SSDCLCT = Low current MS14SSDC with thermal lockout
MS14SSACLC = Low current Male 5 Pin Brad Harrison Connector & Light (Alternating Current)
MS14SSACLCT = Low current Male 5 Pin Brad Harrison Connector & Light (Alternating Current) with thermal lockout

Visual Indicator

D9 = Stainless Steel Latching Pop-Up Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring
D10SS = Stainless Steel Non-Latching Indicator

Options

Omit = None
G509 = Dirt Alarm and drain opposite standard

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Medium Pressure Filter

GK9 | **900 psi** - *60 bar* | 100 gpm - *380 L/min*

Features and Benefits (GK9)

- Extremely versatile multiple inlet and outlet ports; can be used alone or in series with another GK9
- Top loading for easy access for element change-out
- Allows consolidation of inventoried replacement elements by using KG-size elements
- Multiple inlet and outlet porting options reduce the need for additional adapters 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
- HF4 Footprint filter with patented Quality Protection element

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	900 psi (60 bar)
Min. Yield Pressure:	3200 psi (220 bar), per NFPA T2.6.1
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)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 80 psi (5.5 bar)
Porting Base & Cap: Element Case:	Cast Aluminum Steel
Weight of GK9-1KG: Weight of GK9-2KG: Weight of GK9-3KG:	19 lbs. (8.6 kg) 30 lbs. (13.6 kg) 41 lbs. (18.6 kg)
Element Change Clearance:	8.50” (215 mm) for 1KG; 17.50” (445 mm) for KKG; 26.5” (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder GK9

GK9 [ ] – [ ] – [ ] – [ ] – [ ]

Bowl Length | **Element** | **Porting/Test Points** | **Indicator** | **Options**

Bowl Length

1 = 9”/18”/27” bowl with one (1) element
2 = 18” Bowl with two (2) 9” elements
3 = 27” Bowl with three (3) 9” elements

Element

Note: Element code can also be used to build a replacement element.

Element	Media	Micron Rating	Seals
KG (9", 18", or 27" Bowl) **KKG** (18" Bowl) **27KG** (27" Bowl)	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media) **Omit =** (W Media Only)	**Omit =** Buna **V =** Viton

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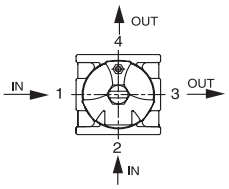
Porting/Test Points	Port 1	Port 2	Port 3	Port 4	Bypass	Test Points
	**N =** None **P16 =** 1" NPTF **P20 =** 1-¼" NPTF **P24 =** 1-½" NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **B16 =** ISO 228 G-1" **B20 =** ISO 228 G-1-¼" **B24 =** ISO 228 G-1-¼"	**N =** None **P16 =** 1" NPTF" **P20 =** 1-¼" NPTF **P24 =** 1-½" NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **F16 =** 1" SAE 4-bolt flange Code 61 **F20 =** 1-¼" SAE 4-bolt flange Code 61 **F24 =** 1-1/2" SAE 4-bolt flange Code 61 **B16 =** ISO 228 G-1" **B20 =** ISO 228 G-1-¼ **B24 =** ISO 228 G-1-½"	**N =** None **P16 =** 1" NPTF **P20 =** 1-¼" NPTF **P24 =** 1-½" NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **B16 =** ISO 228 G-1" **B20 =** ISO 228 G-1-¼" **B24 =** ISO 228 G-1-½"	**N =** None **P16 =** 1" NPTF **P20 =** 1-¼" NPTF **P24 =** 1-½" NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **F16 =** 1" SAE 4-bolt flange Code 61 **F20 =** 1-¼" SAE 4-bolt flange Code 61 **F24 =** 1-½" SAE 4-bolt flange Code 61 **B16 =** ISO 228 6-1" **B20 =** ISO 228 G-1-¼ **B24 =** ISO 228 G-1-½	**Omit =** 40 PSI **10 =** 10 PSI **20 =** 20 PSI **25 =** 25 PSI **30 =** 30 PSI **60 =** 60 PSI	**Omit =** None **U =** Test point in cap (Upstream) **UU =** Test points in block (upstream and downstream)

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12" 4-Conductor Cable	**Omit =** None	**Omit =** None (All except MS18 & MS19)
MS10 = Male DIN Connector	**LC =** Low Current	**NO =** Normally Open (Only MS18 & MS19)
MS12 = Male 5 Pin Brad Harrison Connector	**T =** Thermal Lockout	**NC =** Normally Closed (Only MS18 & MS19)
MS16 = Weather Packed Seal Connector	**LCT =** Low Current with Thermal Lockout	
MS17 = Male Micro 4 Pin Brad Harrison Connector		
MS18 = 2 Pin Amp Junior Power Timer Connector		
MS19 = 2 Pin Deutsch Connector		

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	**Omit =** None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =** Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =** Thermal Lockout
	LCT = Low Current with Thermal Lockout

Visual Indicator

D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

C = Indicator in cap

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

2. **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).**

Single Pass Filter Kit

G2K9 | **900 psi** - *60 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Two patented-pending GK9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration
- HF4 Footprint filter with patented Quality Protection element
- 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems
- Top loading for easy access for element change out
- Can be fitted with test points for oil sampling

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	900 psi (60 bar)
Min. Yield Pressure:	3200 psi (220 bar), per NFPA T2.6.1
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)
Bypass Setting:	Cracking: 40 psi (2.8 bar) each filter housing
Porting Base & Cap: Element Case:	Cast Aluminum Steel
Weight of GK9-1KG: Weight of GK9-2KG: Weight of GK9-3KG:	19 lbs. (8.6 kg) 30 lbs. (13.6 kg) 41 lbs. (18.6 kg)
Element Change Clearance:	8.50" (215 mm) for 1KG; 17.5" (445 mm) for KKG; 26.5" (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder G2K9:

G2K9 [ ] – [ ] – [ ] – [ ] – [ ]

Bowl Length **Element** **Porting** **Indicator** **Test Points**

Bowl Length

1 = 9"/18"/27" bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9" elements

Element	Element	Media	Micron Rating for Housing 1	Micron Rating for Housing 2	Seals
Note: Element code can also be used to build a replacement element.	**KG** (9", 18", or 27" Bowl) **KKG** (18" Bowl) **27KG** (27" Bowl)	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media)	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media)	**B =** Buna **V =** Viton

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(Model code builder continued)

Porting	Inlet Porting	Outlet Porting	Bypass
	P16 = 1" NPTF	**P16 =** 1" NPTF	**Omit =** 40 PSI
	P20 = 1-1/4" NPTF	**P20 =** 1-1/4" NPTF	**30 =** 30 PSI
	P24 = 1-1/2" NPTF	**P24 =** 1-1/2" NPTF	**50 =** 50 PSI
	S16 = SAE-16	**S16 =** SAE-16	
	S20 = SAE-20	**S20 =** SAE-20	
	S24 = SAE-24	**S24 =** SAE-24	
	F16 = 1" SAE 4-bolt flange Code 61	**F16 =** 1" SAE 4-bolt flange Code 61	
	F20 = 1-1/4" SAE 4-bolt flange Code 61	**F20 =** 1-1/4" SAE 4-bolt flange Code 61	
	F24 = 1-1/2" SAE 4-bolt flange Code 61	**F24 =** 1-1/2" SAE 4-bolt flange Code 61	
	B16 = ISO 228 G-1"	**B16 =** ISO 228 G-1"	
	B20 = ISO 228 G-1-1/4"	**B20 =** ISO 228 G-1-1/4"	
	B24 = ISO 228 G-1-1/2	**B24 =** ISO 228 G-1-1/2	

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12" 4-Conductor Cable	**Omit =** None	**Omit =** None (All except MS18 & MS19)
MS10 = Male DIN Connector	**LC =** Low Current	**NO =** Normally Open (Only MS18 & MS19)
MS12 = Male 5 Pin Brad Harrison Connector	**T =** Thermal Lockout	**NC =** Normally Closed (Only MS18 & MS19)
MS16 = Weather Packed Seal Connector	**LCT =** Low Current with Thermal Lockout	
MS17 = Male Micro 4 Pin Brad Harrison Connector		
MS18 = 2 Pin Amp Junior Power Timer Connector		
MS19 = 2 Pin Deutsch Connector		

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	**Omit =** None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =** Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =** Thermal Lockout
	LCT = Low Current with Thermal Lockout

Visual Indicator

D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Test Points[2]

Omit = None
C = Indicator in cap
U = Test point in cap (upstream)
UU = Test points in block (upstream and downstream)

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

2. **Option UU will not be available in combination with indicator in block.**

Single Pass Filter Kit

G3K9 | **900 psi** - *60 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Three patented-pending K9 filters supplied in series as a single filter assembly providing in-line single pass particulate and water filtration
- HF4 Footprint filter with patented Quality Protection element
- 900 psi rating covers almost all transfer line pressure specs including air driven transfer systems
- Top loading for easy access for element change out
- Can be fitted with test points for oil sampling

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	900 psi (60 bar)
Min. Yield Pressure:	3200 psi (220 bar), per NFPA T2.6.1
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)
Bypass Setting:	Cracking: 40 psi (2.8 bar) each filter housing
Porting Base & Cap: Element Case:	Cast Aluminum Steel
Element Change Clearance:	8.50” (215 mm) for 1KG; 17.5” (445 mm) for KKG; 26.5” (673 mm) for 27KG

How to Build a Valid Model Number for a Schroeder G3K9:

G3K9		–		–		–		–	
	Bowl Length		Element		Porting		Indicator		Test Points

Bowl Length	
	1 = 9”/18”/27” bowl with one (1) element **2 =** 18” Bowl with two (2) 9” elements **3 =** 27” Bowl with three (3) 9” elements

Element	Element	Media	Micron Rating for Housing 1	Micron Rating for Housing 2	Micron Rating for Housing 3	Seals
Note: Element code can also be used to build a replacement element.	**KG** (9", 18", or 27" Bowl) **KKG** (18" Bowl) **27KG** (27" Bowl)	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**1 =** 1μ (Z, ZW Media) **3 =** 3μ (E, Z, AS, ZW Media) **5 =** 5μ (Z, AS, ZW Media) **10 =** 10μ (E, Z, AS, ZW, ED Media) **25 =** 25μ (E, Z, ZW Media) **Omit =** (W Media Only)	**1 =** 1μ (Z, ZW Media) **3 =** 3μ (E, Z, AS, ZW Media) **5 =** 5μ (Z, AS, ZW Media) **10 =** 10μ (E, Z, AS, ZW, ED Media) **25 =** 25μ (E, Z, ZW Media) **Omit =** (W Media Only)	**1 =** 1μ (Z, ZW Media) **3 =** 3μ (E, Z, AS, ZW Media) **5 =** 5μ (Z, AS, ZW Media) **10 =** 10μ (E, Z, AS, ZW, ED Media) **25 =** 25μ (E, Z, ZW Media) **Omit =** (W Media Only)	**B =** Buna **V =** Viton

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(Model code builder continued)

Porting	Inlet Porting	Outlet Porting	Bypass
	P16 = 1” NPTF **P20 =** 1-1/4” NPTF **P24 =** 1-1/2” NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **F16 =** 1” SAE 4-bolt flange Code 61 **F20 =** 1-1/4” SAE 4-bolt flange Code 61 **F24 =** 1-1/2” SAE 4-bolt flange Code 61 **B16 =** ISO 228 G-1” **B20 =** ISO 228 G-1-1/4” **B24 =** ISO 228 G-1-1/2	**P16 =** 1” NPTF **P20 =** 1-1/4” NPTF **P24 =** 1-1/2” NPTF **S16 =** SAE-16 **S20 =** SAE-20 **S24 =** SAE-24 **F16 =** 1” SAE 4-bolt flange Code 61 **F20 =** 1-1/4” SAE 4-bolt flange Code 61 **F24 =** 1-1/2” SAE 4-bolt flange Code 61 **B16 =** ISO 228 G-1” **B20 =** ISO 228 G-1-1/4” **B24 =** ISO 228 G-1-1/2	**Omit =** 40 PSI **30 =** 30 PSI **50 =** 50 PSI

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12” 4-Conductor Cable **MS10 =** Male DIN Connector **MS12 =** Male 5 Pin Brad Harrison Connector **MS16 =** Weather Packed Seal Connector **MS17 =** Male Micro 4 Pin Brad Harrison Connector **MS18 =** 2 Pin Amp Junior Power Timer Connector **MS19 =** 2 Pin Deutsch Connector	**Omit =** None **LC =** Low Current **T =** Thermal Lockout **LCT =** Low Current with Thermal Lockout	**Omit =** None (All except MS18 & MS19) **NO =** Normally Open (Only MS18 & MS19) **NC =** Normally Closed (Only MS18 & MS19)

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current) **MS14DC =** Male 5 Pin Brad Harrison Connector & Light (Direct Current) **MS14AC =** Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**Omit =** None **LC =** Low Current **T =** Thermal Lockout **LCT =** Low Current with Thermal Lockout

Visual Indicator

D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Test Points

Omit = None
C = Indicator in cap
U = Test point in cap (Upstream)
UU = Test points in block (upstream and downstream)

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it’s visual you will use the visual column and that will complete this box. If it’s electrical you will populate the column under “MS = Electrical.” If no indicator is required you will omit the whole section and move onto the next section**

2. **Option UU will not be available in combination with indicator in block.**

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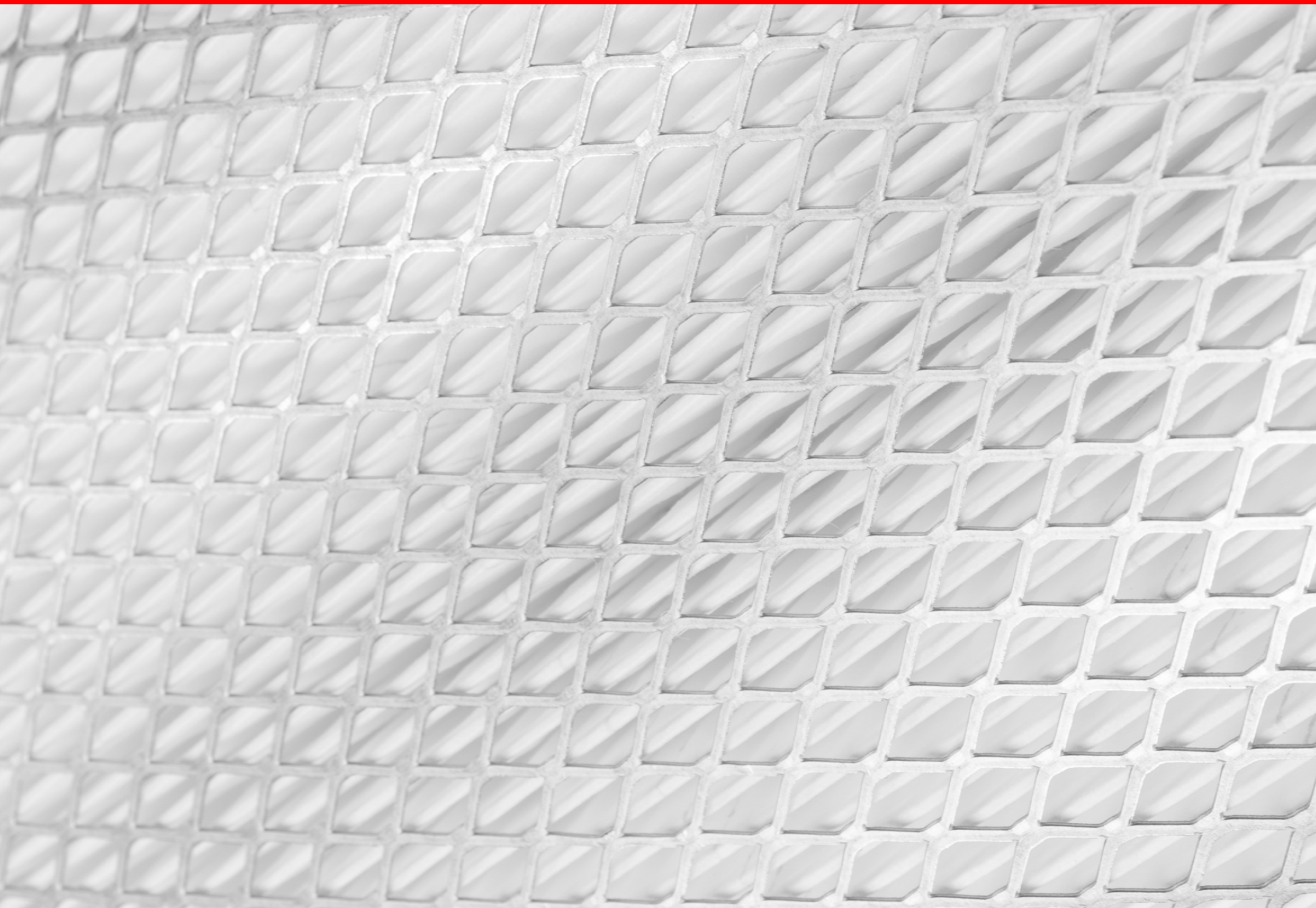
Section 2: TOP-PORTED FILTERS



HydraSPIN Filter Series

GH | **500-725 psi** - *35-50 bar* | 35-112 gpm - *130-425 L/min*

GH6

GH9

GH14

GH11

Model No. of filters in photographs are GH6, GH9, GH11, and GH14

Features and Benefits

- Variety of differential indicator port options (visual and electrical indicators)
- Leak proof bar indicator, rugged visual indicator with protective aluminum shield is standard
- Proprietary bowl to element seal - minimizes potential leakage point by use of one seal on element
- Cartridge style element (non spin-on) that is proprietary and patented with integrated bypass valve features
- Wide variety of media grades that can be application specific
- Light weight bowl design with replaceable element minimizes landfill waste
- Mounting interchangeability with competitor's filter head

Part of Schroeder Industries' 2030 Initiative

Filter Housing Specifications

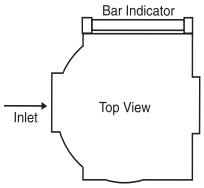
	GH6	GH9	GH11	GH14
Flow Rating: (150 SUS (32 cSt) fluids)	Up to 35 gpm (130 L/min)	Up to 35 gpm (130 L/min)	Up to 87 (325 L/min)	Up to 112 gpm (425 L/min)
Max. Operating Pressure:	725 psi (50 bar)	725 psi (50 bar)	500 psi (35 bar)	500 psi (35 bar)
Min. Yield Pressure:	2600 psi (179 bar)	2600 psi (179 bar)	2700 psi (186 bar)	2700 psi (186 bar)
Rated Fatigue Pressure:	725 psi (50 bar)	725 psi (50 bar)	500 psi (35 bar)	500 psi (35 bar)
Temp. Range:	-20°F to 225°F (-29°C to 107°C)	-20°F to 225°F (-29°C to 107°C)	-22F° to 212°F (-30°C to 100°C)	-22F° to 212°F (-30°C to 100°C)
Bypass Setting:	25 psi (1.7 bar) standard 50 psi (3.5 bar) optional Non-Bypassing	25 psi (1.7 bar) standard 50 psi (3.5 bar) optional Non-Bypassing	43 psi (3 bar) standard 87 psi (6 bar) optional Non-Bypassing	43 psi (3 bar) standard 87 psi (6 bar) optional Non-Bypassing
Porting Head:	Cast Aluminum	Cast Aluminum	Cast Aluminum	Cast Aluminum
Element Case:	Aluminum	Aluminum	Aluminum	Aluminum
Weight:	3.2 lbs (1.4 kg)	3.8 lbs (1.7 kg)	8.0 lbs (3.6 kg)	10.0 lbs (4.5 kg)
Element Change Clearance:	2" (50 mm)	2" (50 mm)	7.4" (187 mm)	7.4" (187 mm)

How to Build a Valid Model Number for a Schroeder GH6/9:

GH [ ] – [ ] – [ ]
Element Porting Indicator

Element	Element	Media	Micron Rating	Bypass	Seals
Note: Element code can also be used to build a replacement element.	**6G =** 6" Bowl **9G =** 9" Bowl	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media **H =** Excellement Hydraspin Media	**3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED, H Media) **25 =** 25µ (E, Z, ZW Media) **Omit =** (W Media Only)	**Omit =** 25 PSID **50 =** 50 PSID **N =** Non-Bypassing	**Omit =** Buna

Porting	Porting
	S12 = SAE 12 **S16 =** SAE 16 **B12 =** ISO 228 G-¾" **B16 =** ISO 228 G-1"

Indicator	Visual	Electrical
Bar Indicator Locations: 	**Omit =** None **L =** Bar Indicator Left Side **R =** Bar Indicator Right Side **B =** Bar Indicator Left & Right Side **VA =** Visual Pop-Up w/ Auto Reset **VM =** Visual Pop-Up w/ Manual Reset	**Omit =** None **M =** Drilled, tapped, plugged **DTC =** DC 2 Wire, Normally Closed **DTO =** DC 2 Wire, Normally Open **DW =** AC/DC 3-wire (NO or NC)

How to Build a Valid Model Number for a Schroeder GH11/14:

GH [ ] – [ ] – [ ]
Element Porting Indicator

Element	Element	Media	Micron Rating	Bypass	Seals
Note: Element code can also be used to build a replacement element.	**11G =** 11" Bowl **14G =** 14" Bowl	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media **H =** Excellement Hydraspin Media	**3 =** 3µm (E, Z, AS, ZW Media) **5 =** 5µm (Z, AS, ZW Media) **10 =** 10µm (E, Z, AS, ZW, ED, H Media) **25 =** 25µm (E, Z, ZW Media)	**Omit =** 47 PSID **87 =** 87 PSID **N =** Non-Bypassing	**Omit =** Buna **V =** Viton

Porting	Porting
	B24 = ISO 228 G-1½" **S24 =** SAE 24

Indicator	Visual	Electrical
	Omit = None **VA =** Visual Pop-Up w/ Auto Reset **VM =** Visual Pop-Up w/ Manual Reset **VF =** Visual Analog	**Omit =** None **EC =** Electric Switch - SDPT **ED =** Electrical Switch and LED light - SPDT

Medium Pressure Filter

GKF5 | **500 psi** - *35 bar* | 100 gpm - *380 L/min*

Features and Benefits

- HF4 Footprint filter with patented Quality Protection element
- Offered in pipe, SAE straight thread, flange and ISO 228 porting
- Available with NPTF inlet and outlet female test ports
- Various Dirt Alarm® options
- Allows consolidation of inventoried replacement elements by using KG-size elements

Model No. of filter in photograph is GKF51KGZ10SD5.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	500 psi (35 bar)
Min. Yield Pressure:	1500 psi (100 bar) , per NFPA T2.6.1
Rated Fatigue Pressure:	300 psi (35 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 61 psi (4.2 bar)
Porting Base & Cap: Element Case:	Gray Cast Iron Steel
Weight of GKF5-1KG:	23.2 lbs. (10.5 kg)
Element Change Clearance:	2.0” (51 mm)

How to Build a Valid Model Number for a Schroeder GKF5:

GKF5 [ ] – [ ] – [ ] – [ ]

Bowl Length – Element – Porting/Test Points – Indicator

Bowl Length

1 = One 9" Bowl Length

Element

Note: Element code can also be used to build a replacement element.

Element	Media	Micron Rating	Seals
KG (9"Bowl)	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media) **Omit =** (W Media Only)	**Omit =** Buna **V =** Viton

Porting/Test Points

Porting	Bypass	Test Points
P24 = 1-1/2" NPTF **P32 =** 2" NPTF **S24 =** SAE-24 **S32 =** SAE-32 **F24 =** 1-1/2" SAE split 4-bolt flange code 61 **B24 =** ISO 228 G-1-1/2"	**Omit =** 40 PSI **50 =** 50 PSI	**Omit =** None **L =** Two 1/4" NPTF inlet and outlet female test ports

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12" 4-Conductor Cable **MS10 =** Male DIN Connector **MS12 =** Male 5 Pin Brad Harrison Connector **MS16 =** Weather Packed Seal Connector **MS17 =** Male Micro 4 Pin Brad Harrison Connector **MS18 =** 2 Pin Amp Junior Power Timer Connector **MS19 =** 2 Pin Deutsch Connector	**Omit =** None **LC =** Low Current **T =** Thermal Lockout **LCT =** Low Current with Thermal Lockout	**Omit =** None (All except MS18 & MS19) **NO =** Normally Open (Only MS18 & MS19) **NC =** Normally Closed (Only MS18 & MS19)

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current) **MS14DC =** Male 5 Pin Brad Harrison Connector & Light (Direct Current) **MS14AC =** Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**Omit =** None **LC =** Low Current **T =** Thermal Lockout **LCT =** Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Return Line Filter

GKF3 | **300 psi** - *20 bar* | 100 gpm - *380 L/min*

Features and Benefits

- HF4 Footprint filter with patented Quality Protection element
- Offered in pipe, SAE straight thread, flange, and ISO 228 porting
- Various Dirt Alarm® options
- Available with NPTF inlet and outlet female test ports
- Available with magnet inserts
- Available with housing drain plug
- Takes the standard “KG” element in KG, KKG or 27KG lengths
- Allows consolidation of inventoried replacement elements by using KG-size elements

Model No. of filter in photograph is GKF31K10SD5.

Filter Housing Specifications

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

How to Build a Valid Model Number for a Schroeder GKF3:

GKF3 – [Bowl Length] – [Element] – [Magnet/Porting/Bypass] – [Indicator] – [Options]

Bowl Length

1 = 9"/18"/27" bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9" elements

Element

Note: Element code can also be used to build a replacement element.

Element		Media		Micron Rating		Seals	
KG	(9", 18", or 27" Bowl)	**Z =**	Excellement Z-Media (Synthetic)	**1 =**	1µm (Z, ZW Media)	**Omit =**	Buna
KKG	(18" Bowl)	**Omit =**	E Media (Cellulose)	**3 =**	3µm (E, Z, AS, ZW Media)	**V =**	Viton
27KG	(27" Bowl)	**AS =**	Anti-Stat Media (Synthetic)	**5 =**	5µm (Z, AS, ZW Media)		
		ZW =	Aqua-Excellement ZW Media	**10 =**	10µm (E, Z, AS, ZW, ED Media)		
		W =	W Media (Water Removal)	**25 =**	25µm (E, Z, ZW Media)		
		ED =	Electic Drive Media	**Omit =**	(W Media Only)		

Magnet/Porting/Bypass

Magnet Option		Porting		Bypass	
Omit =	None	**P =**	1-1/2" NPTF	**Omit =**	30 PSI
M =	Magnet	**S =**	SAE-24	**40 =**	40 PSI
		F =	1-1/2" SAE split 4-bolt flange code 61	**50 =**	50 PSI
		B =	ISO 228 G-1-1/2	**60 =**	60 PSI

Indicator[1]

Omit = None

Electrical Indicator		Current/Thermal Lockout		Normally Open/Closed	
MS5 =	12" 4-Conductor Cable	**Omit =**	None	**Omit =**	None (All except MS18 & MS19)
MS10 =	Male DIN Connector	**LC =**	Low Current	**NO =**	Normally Open (Only MS18 & MS19)
MS12 =	Male 5 Pin Brad Harrison Connector	**T =**	Thermal Lockout	**NC =**	Normally Closed (Only MS18 & MS19)
MS16 =	Weather Packed Seal Connector	**LCT =**	Low Current with Thermal Lockout		
MS17 =	Male Micro 4 Pin Brad Harrison Connector				
MS18 =	2 Pin Amp Junior Power Timer Connector				
MS19 =	2 Pin Deutsch Connector				

MS11 = 12 ft 4-Conductor Cable
MS15DC = 3000 PSI max #8-32 Post for Wire Connection

Electrical Visual Indicator		Current/Thermal Lockout	
MS13DC =	Threaded Connector and Light (Direct Current)	**Omit =**	None
MS14DC =	Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =**	Low Current
MS14AC =	Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =**	Thermal Lockout
		LCT =	Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Options

Omit = None
L = Two 1⁄4" NPTF inlet and outlet test ports
G426 = 3⁄4" drain on bottom of housing
G440 = 1⁄2" drain on bottom of housing

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Return Line Filter with Threaded Bowl

GKL3 | **300 psi** - *20 bar* | 120 gpm - *455 L/min*

Features and Benefits

- Threaded bowl allows for easier removal and facilitates element changes
- Available with KG-size elements
- Available with 1½" and 2" porting
- Offered in pipe, SAE straight thread, ISO 228, and flange porting
- Various Dirt Alarm® options
- Available with NPTF inlet and outlet female test ports
- Available with housing drain plug

Model No. of filter in photograph is GKL31KGZ10F24.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids for P24, S24, F24 and B24 porting Up to 120 gpm (455 L/min) for 150 SUS (32 cSt) fluids for P32, S32 and B32 porting
Max. Operating Pressure:	300 psi (20 bar)
Min. Yield Pressure:	1000 psi (70 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	300 psi (20 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 68 psi (4.7 bar)
Porting Base & Cap: Element Case:	Cast Aluminum Steel
Weight of KL3-18LCG: Weight of KL3-1KG: Weight of KL3-2KG: Weight of KL3-3KG:	20.00 lbs. (9.1 kg) 14.75 lbs. (6.7 kg) 18.50 lbs. (8.4 kg) 22.75 lbs. (10.3 kg)
Element Change Clearance:	2.50” (64 mm)

How to Build a Valid Model Number for a Schroeder GKL3:

GKL3 – [Bowl Length] – [Element] – [Porting] – [Indicator] – [Test Points/Bowl Drain]

Bowl Length

1 = 9"/18"/27" bowl with one (1) element
2 = 18" Bowl with two (2) 9" elements
3 = 27" Bowl with three (3) 9" elements

Element

Note: Element code can also be used to build a replacement element.

Element

KG (9", 18", or 27" Bowl)
KKG (18" Bowl)
27KG (27" Bowl)

Media

Z = Excellement Z-Media (Synthetic)
Omit = E Media (Cellulose)
AS = Anti-Stat Media (Synthetic)
ZW = Aqua-Excellement ZW Media
W = W Media (Water Removal)
ED = Electic Drive Media

Micron Rating

1 = 1µ (Z, ZW Media)
3 = 3µ (E, Z, AS, ZW Media)
5 = 5µ (Z, AS, ZW Media)
10 = 10µ (E, Z, AS, ZW, ED Media)
25 = 25µ (E, Z, ZW Media)
Omit = (W Media Only)

Seals

Omit = Buna
V = Viton

Porting

Porting

P24 = 1-1/2" NPTF
P32 = 2" NPTF
S24 = SAE-24
S32 = SAE-32
F24 = 1-1/2" SAE 4-bolt flange code 61
B24 = ISO 228 G-1-1/2"
B32 = ISO 228 G-2"

Bypass

Omit = 30 PSI
40 = 40 PSI
50 = 50 PSI

Indicator[1]

Omit = None

Electrical Indicator

MS5 = 12" 4-Conductor Cable
MS10 = Male DIN Connector
MS12 = Male 5 Pin Brad Harrison Connector
MS16 = Weather Packed Seal Connector
MS17 = Male Micro 4 Pin Brad Harrison Connector
MS18 = 2 Pin Amp Junior Power Timer Connector
MS19 = 2 Pin Deutsch Connector

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

Normally Open/Closed

Omit = None (All except MS18 & MS19)
NO = Normally Open (Only MS18 & MS19)
NC = Normally Closed (Only MS18 & MS19)

Electrical Visual Indicator

MS13DC = Threaded Connector and Light (Direct Current)
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)

Current/Thermal Lockout

Omit = None
LC = Low Current
T = Thermal Lockout
LCT = Low Current with Thermal Lockout

Visual Indicator

D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Test Points/Bowl Drain

Test Point

Omit = None
L = Two 1/4" NPTF inlet and outlet female test ports

Bowl Drain

Omit = None
DR = 3⁄8"drain on bottom of housing

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section**

Top-Ported Return Line Filter

GMLF1 | **300 psi** - *20 bar* | 200 gpm - *760 L/min*

Features and Benefits

- Equipped with inlet and outlet manifolds
- HF4 Footprint filter with patented Quality Protection element
- 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

Model No. of filter in photograph is GMLF14KG10PD.

Filter Housing Specifications

Flow Rating:	Up to 200 gpm (760 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	300 psi (20 bar)
Min. Yield Pressure:	1000 psi (70 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	250 psi (17 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 25 psi (2 bar) Full Flow: 60 psi (4 bar)
Porting Base & Cap: Element Case:	Anodized Cast Aluminum Steel
Weight of MLF1-2KG: Weight of MLF1-4KG: Weight of MLF1-6KG:	44.0 lbs. (20.0 kg) 50.0 lbs. (23.0 kg) 58.0 lbs. (26.0 kg)
Element Change Clearance:	2.0” (55 mm)

How to Build a Valid Model Number for a Schroeder GMLF1:

GMLF1 – [Bowl Length] – [Element] – [Porting] – [Indicator] – [Test Points/Bowl Drain]

Bowl Length

2 = 9”/18”/27” bowl with one (1) element in each bowl
4 = 18” Bowl with two (2) 9” elements in each bowl
6 = 27” Bowl with three (3) 9” elements in each bowl

Element

Note: Element code can also be used to build a replacement element.

Element		Media		Micron Rating		Seals	
KG	(9", 18", or 27” Bowl)	**Z =**	Excellement Z-Media (Synthetic)	**1 =**	1µ (Z, ZW Media)	**Omit =**	Buna
KKG	(18” Bowl)	**Omit =**	E Media (Cellulose)	**3 =**	3µ (E, Z, AS, ZW Media)	**V =**	Viton
27KG	(27” Bowl)	**AS =**	Anti-Stat Media (Synthetic)	**5 =**	5µ (Z, AS, ZW Media)		
		ZW =	Aqua-Excellement ZW Media	**10 =**	10µ (E, Z, AS, ZW, ED Media)		
		W =	W Media (Water Removal)	**25 =**	25µ (E, Z, ZW Media)		
		ED =	Electic Drive Media	**Omit =**	(W Media Only)		

Porting

Magnet		Porting		Bypass	
Omit =	None	**P =**	2-1/2” NPTF	**Omit =**	25 PSI
M =	Magnet Inserts	**F =**	2-1/2” SAE 4-Bolt Flange Code 61	**50 =**	50 PSI

Indicator[1]

Omit = None

Electrical Indicator		Current/Thermal Lockout		Normally Open/Closed	
MS5 =	12” 4-Conductor Cable	**Omit =**	None	**Omit =**	None (All except MS18 & MS19)
MS10 =	Male DIN Connector	**LC =**	Low Current	**NO =**	Normally Open (Only MS18 & MS19)
MS12 =	Male 5 Pin Brad Harrison Connector	**T =**	Thermal Lockout	**NC =**	Normally Closed (Only MS18 & MS19)
MS16 =	Weather Packed Seal Connector	**LCT =**	Low Current with Thermal Lockout		
MS17 =	Male Micro 4 Pin Brad Harrison Connector				
MS18 =	2 Pin Amp Junior Power Timer Connector				
MS19 =	2 Pin Deutsch Connector				

MS11 = 12 ft 4-Conductor Cable
MS15DC = #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	**Omit =** None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =** Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =** Thermal Lockout
	LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2” Conduit, Female Connection

Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

Test Points/Bowl Drain

Test Point		Bowl Drain	
Omit =	None	**Omit =**	None
L =	Two 1⁄4” NPTF inlet and outlet test ports	**G426 =**	3/4”drain on bottom of housing
		G440 =	1/2” drain on bottom of housing

1. **Starting from the left you will choose your Indicator Type (visual or electrical), if it’s visual you will use the visual column and that will complete this box. If it’s electrical you will populate the column under “MS = Electrical.” If no indicator is required you will omit the whole section and move onto the next section**

Top-Ported Pressure Filter

NFLK30 | **3000 psi** - *210 bar* | 20 gpm - *75 L/min*

Model No. of filter in photograph is NFLK301NLKZ105D5

Features and Benefits

- Top-ported pressure filter
- All aluminum assembly
- Offered in pipe, SAE straight thread and ISO 228 porting
- Lock & Key Quality Protected Elements (NFLK30)

Filter Housing Specifications

Flow Rating:	Up to 20 gpm (75 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	3000 psi (210 bar)
Min. Yield Pressure:	10,000 psi (690 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	2400 psi (165 bar), per NFPA T2.6.1
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 40 psi (2.8 bar) Full Flow: 85 psi (5.9 bar)
Porting Head: Element Case:	Aluminum Aluminum
Weight of NFLK30-1NLK: Weight of NFLK30-1NNLK:	3.4 lbs. (1.5 kg) 4.4 lbs. (2.0 kg)
Element Change Clearance:	4.50” (115 mm)

How to Build a Valid Model Number for a Schroeder NFLK30:

NFLK30 [ ] – [ ] – [ ] – [ ] – [ ]

Bowl Length | Element | Porting | Indicator | Options

Bowl Length

1 = 1 single element/bowl length

Element

Note: Element code can also be used to build a replacement element.

Element		Media		Micron Rating		Seals	
NLK =	Single Length	**Z =**	Excellement Z-Media (Synthetic)	**1 =**	1µ (Z, ZW Media)	**Omit =**	Buna
NNLK =	Double Length	**Omit =**	E Media (Cellulose)	**3 =**	3µ (E, Z, AS, ZW Media)	**V =**	Viton
		AS =	Anti-Stat Media (Synthetic)	**5 =**	5µ (Z, AS, ZW Media)		
		ZW =	Aqua-Excellement ZW Media	**10 =**	10µ (E, Z, AS, ZW, ED Media)		
		W =	W Media (Water Removal)	**25 =**	25µ (E, Z, ZW Media)		
		ED =	Electic Drive Media	**Omit =**	(W Media Only)		

Porting

B = ISO228 G-¾"
P = ¾" NPTF
S = SAE-12

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12" 4-Conductor Cable	**Omit =** None	**Omit =** None (All except MS18 & MS19)
MS10 = Male DIN Connector	**LC =** Low Current	**NO =** Normally Open (Only MS18 & MS19)
MS12 = Male 5 Pin Brad Harrison Connector	**T =** Thermal Lockout	**NC =** Normally Closed (Only MS18 & MS19)
MS16 = Weather Packed Seal Connector	**LCT =** Low Current with Thermal Lockout	
MS17 = Male Micro 4 Pin Brad Harrison Connector		
MS18 = 2 Pin Amp Junior Power Timer Connector		
MS19 = 2 Pin Deutsch Connector		

MS11 = 12 ft 4-Conductor Cable

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	**Omit =** None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =** Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =** Thermal Lockout
	LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2" Conduit, Female Connection

Visual Indicator

D =	Pointer	**D8 =**	Visual with Thermal Lockout
D5 =	Latching Visual Pop-Up	**D10 =**	Non-Latching Indicator
D5AS =	Latching Visual Pop-Up with aluminum shroud	**D13 =**	Stainless Steel Latching Indicator with Music Wire Spring

1. Starting from the left you will choose your Indicator Type (visual or electrical), if it's visual you will use the visual column and that will complete this box. If it's electrical you will populate the column under "MS = Electrical." If no indicator is required you will omit the whole section and move onto the next section

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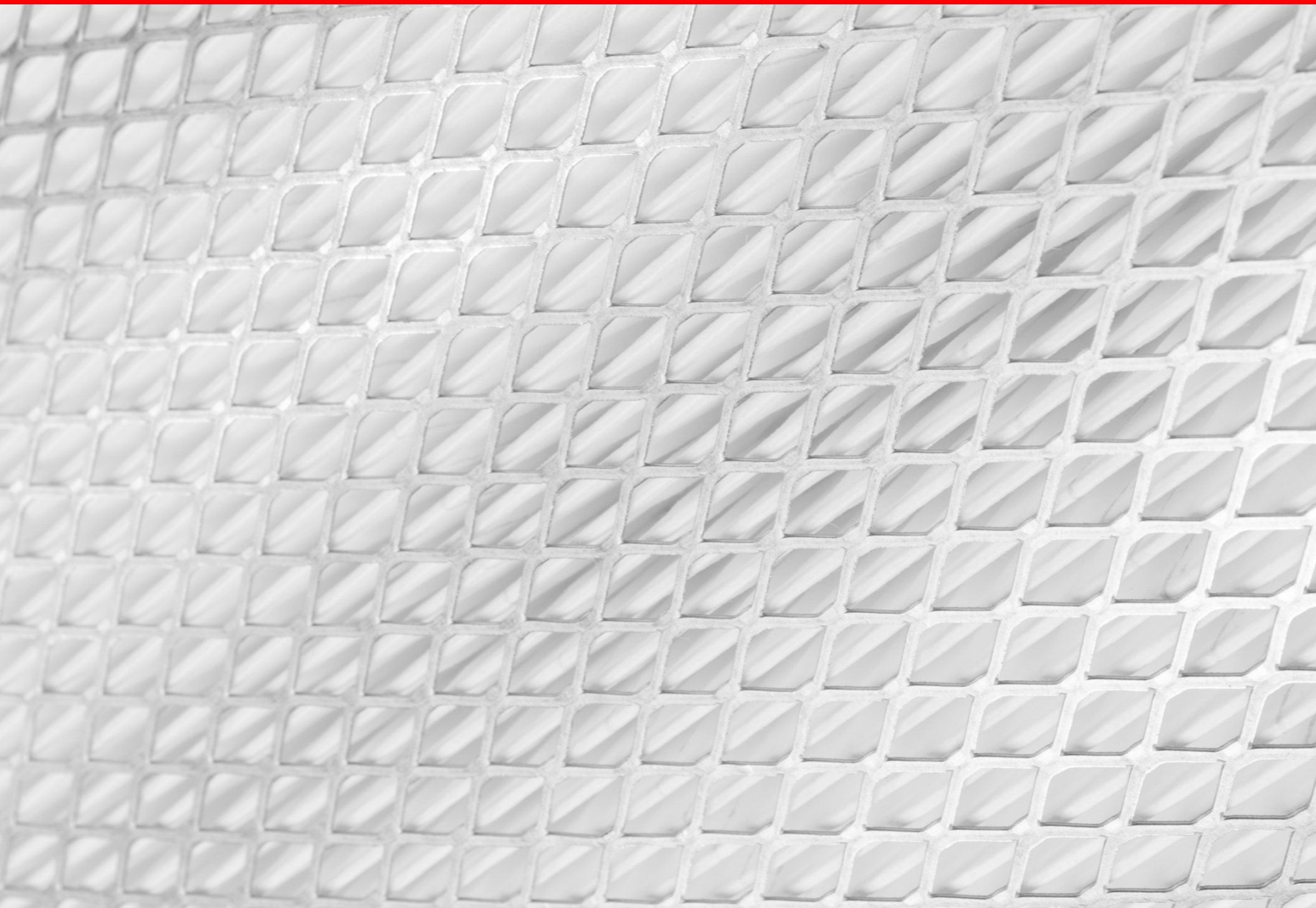
Section 3:

TANK-MOUNTED FILTERS



Air Fusion Technology

AFT | **100 psi** - *7 bar* | 40 gpm - *151 L/min*

Features and Benefits

- Patent Pending in-tank filter design
- Lightweight and as part of a tank optimization package can reduce reservoir size
- Lock & Key Quality Protected, OEM specific interfaces available
- Superior de-aeration performance
- 360 degree swivel connection, lines stay connected during element changeouts
- Anti-Drain check valve option to keep lines from emptying during element changeouts
- 20 ft-lb max loading torque on inlet port

Part of Schroeder Industries' Energy Sustainability Initiative

Model No. of filter in photograph is AFT8LKZ10L16N

Filter Housing Specifications

Flow Rating:	40 gpm (151 L/min)
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	350 psi (24 bar)
Rated Fatigue Pressure:	100 psi (7 bar)
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 45 psi (3 bar)
Element Change Clearance:	4L = 5.28" [134mm] 8L = 8.62" [219mm] 12L = 11.96" [304mm] 16L = 15.30" [389mm]
Element Case:	12 elements
Type Fluid:	Appropriate Schroeder Media
Petroleum Based Fluids:	All E media (cellulose), Z-Media® and ASP® media (synthetic)
High Water Content:	All Z-Media® and ASP® media (synthetic)
Invert Emulsions:	10 and 25 µ Z-Media® and 10 µ ASP® media (synthetic)
Water Glycols:	3, 5, 10 and 25 µ Z-Media® and all ASP® media (synthetic)
Phosphate Esters:	All Z-Media® (synthetic) with H (EPR) seal designation and all ASP® media (synthetic)

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

AFT [ ] – [ ] – [ ]
Element Porting Indicator

Element	Element	Media	Micron Rating	Seals
Note: Element code can also be used to build a replacement element.	**4LK =** 4” Element **8LK =** 8” Element **12LK =** 12” Element **16LK =** 16” Element	**Z =** Excellement Z-Media (Synthetic) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**3 =** 3µ (Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (Z, AS, ZW, ED Media) **25 =** 25µ (Z, ZW Media) **Omit =** (W Media Only)	**Omit =** Buna **V =** Viton

Porting	Porting	Bypass	Check Valve
	S12 = SAE 12 **S16 =** SAE 16 **L12 =** 90 Deg SAE 12 **L16 =** 90 Deg SAE 12 **HB16 =** 1” Hose Barb	**Omit =** 30 PSI **25 =** 25 PSI **40 =** 40 PSI	**Omit =** Check valve **N =** No check valve

Indicator	
	Omit = None **N =** Plugged **Y2 =** Back-Mounted Tri-Color gauge **Y2C** Tricolor visual indicator (Bottom Mounted) **ES =** Electric Switch with Screw Terminals **ES1 =** Electric Switch with 24” wire leads **ES2 =** Electric Switch with 2-Pin Deutche Connector **ES3 =** Electric Switch with DIN 43650

Tank-Mounted Filter

GPT | **150 psi** - *10.3 bar* | 175 gpm - *662 L/min*

Model No. of filter in photograph is GPT15DCLKZ25S24S24

Features and Benefits

- Filter bypass in cap vs base, cleaner cold start
- Patent Pending In-Tank Design
- Lock & Key Quality Protected

Filter Housing Specifications

Flow Rating:	Up to 175 GPM (662 L/min) FOR 150 SUS (32 cSt) Fluids
Max. Operating Pressure:	150 PSI (10.3 bar)
Min. Yield Pressure:	Consult Factory
Rated Fatigue Pressure:	89 psi (6 bar)
Temp. Range:	-20 F to 225 F (-29 C to 107 C)
Bypass Setting:	Cracking: 35 PSI (2.4 bar)
Ported Head and Cap:	Die Cast Aluminum
Weight:	7 LBS. (3.18 kg)
Element Change Clearance:	20.0" (508 mm)
Type Fluid:	Appropriate Schroeder Media
High Water Content:	All Z-Media (synthetic)
Invert Emulsions:	10 and 25 micron Z-Media (synthetic)
Water Glycols:	3, 5, 10, and 25 micron Z-Media (synthetic)
Phosphate Esters:	All Z-Media (synthetic) with H (EPR) seal designation

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

Element	–	Porting	–	Indicator

Element	Element	Media	Micron Rating	Seals
	15DCLK = 15" Element	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media)	**Omit =** Buna **V =** Viton **H =** EPR

Porting	Porting 1	Porting 2	Bypass
	N = None **DF32S24 =** Dual Port Code 61 2" and/or SAE-24	**N =** None **DF32S24 =** Dual Port Code 61 2" and/or SAE-24	**Omit =** 35 PSI

Indicator
Y2 = Tricolor Visual Indicator (Back Mounted) **Y2C=** Tricolor Visual Indicator (Bottom Mounted) **ES5 =** Electric Switch with 3-Pin Deutsch Connector

The 15DCLK element assembly is made up of the GPT diverter cap and the 15TLK element.
A list of model code pairings is shown below:

15DCLKZ10,ELEMENT = DIVERTER, ASSY, GPT, BUNA + 15TLKZ10, ELEMENT
15DCLKZ25,ELEMENT = DIVERTER, ASSY, GPT, BUNA + 15TLKZ25, ELEMENT
15DCLKZ3,ELEMENT = DIVERTER, ASSY, GPT, BUNA + 15TLKZ3, ELEMENT
15DCLKZ5,ELEMENT = DIVERTER, ASSY, GPT, BUNA + 15TLKZ5, ELEMENT

Return Line Filter

BRT | **145 psi** - *10 bar* | 160 gpm - *600 L/min*

Features and Benefits

- Filer is mounted in the tank and flow comes to it from a pipe connection below it or from the side
- Optimal flow conditions created by flow from beneath guaranteeing optimal air separation, even tank mixing, and long element service intervals
- Patented de-aeration windows around the housing offer superior air bubble coalescence in a 360 degree discharge
- Quality Protected Inside-Out Flow Element Design

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Model No. of filter in photograph is BRT6RBZ102.

Filter Housing Specifications

Flow Rating:	Up to 160 gpm (600 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	145 psi (10 bar)
Temp. Range:	-22°F to 248°F (-30°C to 120°C)
Bypass Setting:	Cracking: 36 psi (2.5 bar)
Filter Head & Cover: Inlet Section:	BRT 2 - 6: Aluminum Nylon (PA66)
Seals:	Buna N
Installation:	As in-tank filter

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

BRT [ ] – [ ] – [ ]
Element Porting Indicator

Element	Element Length	Media	Micron Rating	Seals
Note: Element code can also be used to build a replacement element.	**2RB** **3RB** **4RB** **6RB**	**Z =** Excellement Z Media (synthetic) Note: Other media is available upon request.	**10 =** 10µ (Z Media) **25 =** 25µ (Z Media)	**Omit =** Buna **V =** Viton
Porting	**Inlet Porting**			
	2 = Side Inlet **1 =** Bottom Inlet			
Indicator	**Visual**			
	Omit = None **VA =** Visual/Electrical **VE =** Electrical **VO =** Visual Indicator			

Return Line Filter

TRT | **145 psi** - *10 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Filter head is mounted on the tank like standard return-line solution
- The protective tube can be supplied in various optional versions: 1.) as a closed tube with the outlet opening facing downwards or with a closed base and rows of operating holes at the height of the tank's oil level 2.) with an optional magnetic core connected to the filter element guaranteeing effective magnetic pre-filtration
- Patented de-aeration windows around the housing offer superior air bubble coalescence in a 360 degree discharge
- Quality Protected Inside-Out Flow Element Design

Part of Schroeder Industries' Energy Sustainability Initiative

Model No. of filter in photograph is TRT3RTZ10MS.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (400 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	145 psi (10 bar)
Temp. Range:	-22°F to 248°F (-30°C to 120°C)
Bypass Setting:	Cracking: 36 psi (2.5 bar)
Filter Head & Cover: Inlet Section:	BRT 2 - 6: Aluminum Nylon (PA66)
Seals:	Buna N and Viton
Installation:	As in-tank filter

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

TRT [ ] – [ ] – [ ]
Element Porting Indicator

Element	Element Length (in)	Media	Micron Rating	Seals
Note: Element code can also be used to build a replacement element.	**1RT** **2RT** **3RT** **4RT**	**Z =** Excellement Z Media (synthetic) Note: Other media is available upon request.	**5 =** 5µ (Z Media) **10 =** 10µ (Z Media) **25 =** 25µ (Z Media)	**Omit =** Buna **V =** Viton

Porting	Bypass	Magnet	Inlet Porting	Housing Options
	Omit = 36 PSID **12 =** 12 PSID	**Omit =** None **M =** Magnetic Core	**G =** 1-½" BSPP **S =** G 1-½" BSPP, SAE DN 40 (1-½") **S24 =** SAE-24 (requires BSPP to SAE bushing to extend port to port dimensions)	**Omit =** Standard Housing with Diffuser

Indicator	Visual
	Omit = None **VA =** Visual/Electrical **VE =** Electrical **VO =** Visual Indicator

Tank-Mounted Filter

GZT | **100 psi** - *7 bar* | 40 gpm - *150 L/min*

Features and Benefits

- Low pressure tank-mounted filter
- Available with dual inlet porting
- Offered in pipe, SAE straight thread, and ISO 228 porting
- Various Dirt Alarm® options
- Optional PAB1 breather
- Optional dipstick

Filter Housing Specifications

Flow Rating:	Up to 40 gpm (150 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	300 psi (21 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	90 psi (6 bar), per NFPA T2.6.1-R1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 39 psi (2.7 bar)
Porting Base & Cap: Element Case:	Nylon Aluminum
Weight of ZT-8ZG:	3.3 lbs. (1.49 kg)
Element Change Clearance:	10.0” (254 mm)

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

GZT – [Element Length] – [Media] – [Micron Rating] – [Seals] – [Porting] – [Indicator] – [Outlet Porting Options] – [Options]

Element	Element Length	Media	Micron Rating	Seals
Note: Element code can also be used to build a replacement element.	**8GTZ =** 8" Bowl	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electric Drive Media	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media) **Omit =** (W Media Only)	**Omit =** Buna

Porting	Porting
	P = 1" NPTF **PP =** Dual 1" NPTF **S =** SAE-16 **SS =** Dual SAE-16 **B =** ISO 228 G-1" **BB =** Dual ISO 228 G-1"

Indicator
Omit = None **Y2 =** Visual Back-Mounted Tri-Color gauge **Y2C =** Visual Bottom-Mounted Tri Color Gauge in Cap **Y5 =** Visual Back-Mounted Tri-Color Gauge **ES =** Electric Switch with Screw Terminals **ES1 =** Electric Switch with 24" wire leads **ES2 =** Electric Switch with 2-Pin Deutche Connector **ES3 =** Electric Switch with DIN 43650

Options	Outlet Porting Options	Options
	Omit = 1-1/2" NPT male **G3039 =** 1.5" NPT outlet removed **D =** Diffuser **T =** 13" Tube extension	**Omit =** None **B =** Breather **M =** Mounting gasket (Buna N)

Tank-Mounted Filter

GRT | **100 psi** - *7 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Low pressure tank-mounted filter with up to 3 inlet ports
- HF4 Footprint filter with patented Quality Protection element
- 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 KG-size element can be replaced by single KBG, KKBG, or 27KBG-size element
- Various Dirt Alarm® options
- Allows consolidation of inventoried replacement elements by using KBG, KKBG, or 27KBG-size elements

Filter Housing Specifications

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

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

GRT [ ] – [ ] – [ ] – [ ] – [ ]
Bowl Length | Element | Porting | Indicator | Options

Bowl Length

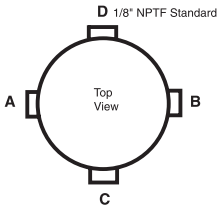
1 = 9”/18”/27 Bowl with one (1) element

Element

Note: Element code can also be used to build a replacement element.

Element		Media		Micron Rating		Seals	
KBG =	(9" Bowl)	**Z =**	Excellement Z-Media (Synthetic)	**1 =**	1µ (Z, ZW Media)	**Omit =**	Buna
KKBG =	(18" Bowl)	**Omit =**	E Media (Cellulose)	**3 =**	3µ (E, Z, AS, ZW Media)		
27KBG =	(27" Bowl)	**AS =**	Anti-Stat Media (Synthetic)	**5 =**	5µ (Z, AS, ZW Media)		
		ZW =	Aqua-Excellement ZW Media	**10 =**	10µ (E, Z, AS, ZW, ED Media)		
		W =	W Media (Water Removal)	**25 =**	25µ (E, Z, ZW Media)		
		ED =	Electic Drive Media	**Omit =**	(W Media Only)		

Porting



Port A		Port B		Port C		Bypass		Outlet Porting Options	
P16 =	1” NPTF	**N =**	None	**N =**	None	**Omit =**	25 PSI	**Omit =**	1-1/2” NPT male
P20 =	1-1/4” NPTF	**P16 =**	1” NPTF	**P2 =**	1/8” NPTF			**C =**	Check valve
P24 =	1-1/2” NPTF	**P20 =**	1-1/4” NPTF	**P16 =**	1” NPTF			**D =**	Diffuser
P32 =	2” NPTF	**P24 =**	1-1/2” NPTF	**S16 =**	SAE-16			**CD =**	Check Valve & Diffuser
S16 =	SAE-16	**P32 =**	2” NPTF					**T =**	13” Tube Extension
S20 =	SAE-20	**S16 =**	SAE-16					**A =**	Non-threaded output
S24 =	SAE-24	**S20 =**	SAE-20						
S32 =	SAE-32	**S24 =**	SAE-24						
F20 =	1-1/4” SAE 4-bolt flange Code 61	**S32 =**	SAE-32						
F24 =	1-1/2” SAE 4-bolt flange Code 61	**F20 =**	1-1/4” SAE 4-bolt flange Code 61						
F32 =	2” SAE 4-bolt flange Code 61	**F24 =**	1-1/2” SAE 4-bolt flange Code 61						
B24 =	ISO 228 G-1-1/2”	**F32 =**	2” SAE 4-bolt flange Code 61						
		B24 =	ISO 228 G-1-1/2”						
Flange Port Option Only:									
M =	Metric SAE 4 Bolt Flange								

Indicator

Omit = None
Y2 = Visual Back-Mounted Tri-Color gauge
Y2C = Visual Bottom-Mounted Tri Color Gauge in Cap
Y5 = Visual Back-Mounted Tri-Color Gauge
Y2R = Back-mounted gauge mounted on opposite side of standard location
ES = Electric Switch with Screw Terminals
ES1 = Electric Switch with 24” wire leads
ES2 = Electric Switch with 2-Pin Deutche Connector
ES3 = Electric Switch with DIN 43650
ESR = Electric switch mounted on opposite side of standard location
ES1R = Heavy-duty electric switch mounted on opposite side of standard location

Options

Omit = None
G2293 = Cork Gasket
G547 = Two 1/8” Gauge Ports
G820 = Stamped Cap

Tank-Mounted Return Line Filter

GRTB | **100 psi** - *7 bar* | 100 gpm - *380 L/min*

Features and Benefits

- Various Dirt Alarm® options
- Cost optimized for in-tank applications
- Plastic bowl and cap lower cost and minimize weight
- UV resistant cap

Model No. of filter in photograph is GRTB1KBGZ10S.

Filter Housing Specifications

Flow Rating:	Up to 100 gpm (380 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	400 psi (28 bar)
Rated Fatigue Pressure:	145 psi (10 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 200°F (-29°C to 93°C)
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 42 psi (2.9 bar)
Cap & Bowl: Porting Head:	Nylon Aluminum
Weight of GRTB-1K:	5.2 lbs. (2.36 kg)
Element Change Clearance:	9.5” (240 mm)

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

GRTB – [Bowl Length] – [Element] – [Porting] – [Indicator]

Bowl Length

1 = One 9” element

Element

Note: Element code can also be used to build a replacement element.

Element	Media	Micron Rating	Seals
KBG = (9" Bowl)	**Z =** Excellement Z-Media (Synthetic) **Omit =** E Media (Cellulose) **AS =** Anti-Stat Media (Synthetic) **ZW =** Aqua-Excellement ZW Media **W =** W Media (Water Removal) **ED =** Electic Drive Media	**1 =** 1µ (Z, ZW Media) **3 =** 3µ (E, Z, AS, ZW Media) **5 =** 5µ (Z, AS, ZW Media) **10 =** 10µ (E, Z, AS, ZW, ED Media) **25 =** 25µ (E, Z, ZW Media) **Omit =** (W Media Only)	**Omit =** Buna

Porting

Port	Outlet Porting Options
P = 1-1/4” NPT **S =** SAE-20 **B =** ISO 228 G 1-1/4	**Omit =** 1-1/2” NPT male **C =** Check valve **D =** Diffuser **CD =** Check valve & diffuser **T =** 13” Tube extension

Indicator

Omit = None
Y2 = Visual Back-Mounted Tri-Color gauge
ES = Electric Switch with Screw Terminals
ES1 = Electric Switch with 24” wire leads
ES2 = Electric Switch with 2-Pin Deutche Connector
ES3 = Electric Switch with DIN 43650

Tank-Mounted Filter

GLRT | **100 psi** - *7 bar* | 150 gpm - *570 L/min*

Features and Benefits

- Low pressure tank-mounted filter
- 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)
- Visual gauge or electrical switch dirt alarms
- Offered in pipe, SAE straight thread, flanged, and ISO 228 porting

Model No. of filter in photograph is GLRT18LGZ10S24NP16Y2.

Filter Housing Specifications

Flow Rating:	Up to 150 gpm (570 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	400 psi (28 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	90 psi (6 bar), per NFPA T2.6.1-2005
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 25 psi (1.7 bar) Full Flow: 34 psi (2.3 bar)
Porting Base & Cap: Element Case:	Die Cast Aluminum Steel
Weight of GLRT-18L:	14.6 lbs. (6.6 kg)
Element Change Clearance:	17.0” (432 mm)

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

GLRT [ ] – [ ] – [ ] – [ ]
Element – Porting – Indicator – Options

Element

Note: Element code can also be used to build a replacement element.

Element Length

18LG = (18" Bowl)

Media

Z = Excellement Z-Media (Synthetic)
Omit = E Media (Cellulose)
AS = Anti-Stat Media (Synthetic)
ZW = Aqua-Excellement ZW Media
W = W Media (Water Removal)
ED = Electic Drive Media

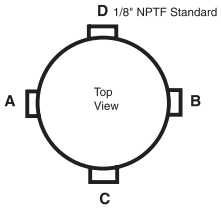
Micron Rating

1 = 1µ (Z, ZW Media)
3 = 3µ (E, Z, AS, ZW Media)
5 = 5µ (Z, AS, ZW Media)
10 = 10µ (E, Z, AS, ZW, ED Media)
25 = 25µ (E, Z, ZW Media)
Omit = (W Media Only)

Seals

Omit = Buna

Porting



Port A

P16 = 1" NPTF
P20 = 1-¼" NPTF
P24 = 1-½" NPTF
P32 = 2" NPTF
S16 = SAE-16
S20 = SAE-20
S24 = SAE-24
S32 = SAE-32
F20 = 1-¼" SAE 4-Bolt flange Code 61
F24 = 1½" SAE 4-Bolt flange Code 61
F32 = 2" SAE 4-Bolt flange Code 61
B24 = ISO 228 G-1½"

Flange Port Option Only:

M = Metric SAE 4 Bolt Flange

Port B

N = None
P16 = 1" NPTF
P20 = 1-¼" NPTF
P24 = 1-½" NPTF
P32 = 2" NPTF
S16 = SAE-16
S20 = SAE-20
S24 = SAE-24
S32 = SAE-32
F20 = 1-¼" SAE 4-Bolt flange Code 61
F24 = 1½" SAE 4-Bolt flange Code 61
F32 = 2" SAE 4-Bolt flange Code 61
B24 = ISO 228 G-1½"

Port C

N = None
P2 = 1/8" NPTF
P16 = 1" NPTF
S16 = SAE-16

Bypass Options

Omit = 25 PSID
40 = 40 PSID

Outlet Porting Options

Omit = 2" NPT male
C = Check valve
D = Diffuser
T = 13" Tube Ext.
A = Non-thread outlet

Indicator

Omit = None
Y2 = Visual Back-Mounted Tri-Color gauge
Y2C = Visual Bottom-Mounted Tri Color Gauge in Cap
Y5 = Visual Back-Mounted Tri-Color Gauge
Y2R = Back-mounted gauge mounted on opposite side of standard location
ES = Electric Switch with Screw Terminals
ES1 = Electric Switch with 24" wire leads
ES2 = Electric Switch with 2-Pin Deutche Connector
ES3 = Electric Switch with DIN 43650
ESR = Electric switch mounted on opposite side of standard location
ES1R = Heavy-duty electric switch mounted on opposite side of standard location

Options

Omit = None
G2293 = Cork gasket
G547 = Two 1/8" gauge ports
G820 = Stamped cap

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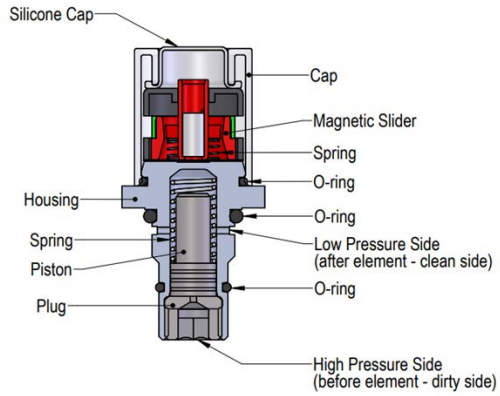
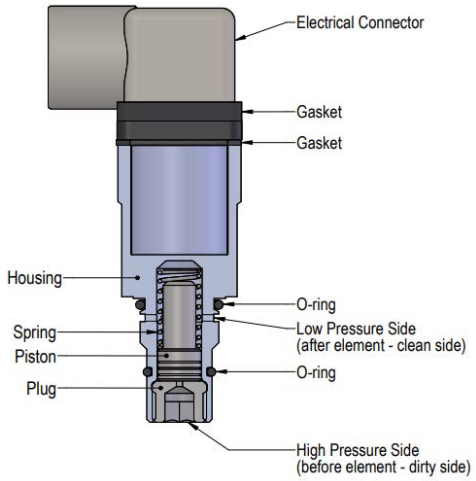
Appendix A:

INDICATORS

Filter Dirt Alarms





Dirt Alarms

Dirt alarms are essential to monitoring the filter element life and ensuring your downstream equipment gets filtered oil and meets the desired ISO code of the equipment. As filter elements collect contaminant the differential pressure across the filter housing rises until the bypass starts to crack and dump contaminated fluid downstream. Placing an indicator on your filter will trip 5 PSID before the bypass cracks open. This is good to warn the user the differential pressure is getting too high before the bypass valve opens.

Schroeder offers a variety of dirt alarms to meet a wide range of customer applications.

Differential Indicators

Visual indicators provide an economical way to know quickly when a filter element needs to be replaced. A variety of styles are available, ranging from gauges to mechanical pointers to pop-up cartridges.

Electrical

The electrical indicators provide an electrical signal for activating various electric alarms. These cartridge-style indicators are available on Schroeder high pressure, medium pressure, and low-pressure filters.

Thermal Lockout

The thermal lockout feature prevents activation of the indicator below fluid temperatures of 90°F (32°C). This feature can be helpful in mobile applications where fluid temperatures may be well below 90°F at equipment start-up and will prevent the indicator from tripping prematurely.

Pressure Switch

Pressure switches measure inlet pressure and trip at a desired pressure setting. Schroeder offers a wide variety of electrical and visual indicator switches for return line and vacuum filtration applications.

Building a Differential Indicator Part Number

Indicator[1]

Omit = None

Electrical Indicator	Current/Thermal Lockout	Normally Open/Closed
MS5 = 12” 4-Conductor Cable	**Omit =** None	**Omit =** None (All except MS18 & MS19)
MS10 = Male DIN Connector	**LC =** Low Current	**NO =** Normally Open (Only MS18 & MS19)
MS12 = Male 5 Pin Brad Harrison Connector	**T =** Thermal Lockout	**NC =** Normally Closed (Only MS18 & MS19)
MS16 = Weather Packed Seal Connector	**LCT =** Low Current with Thermal Lockout	
MS17 = Male Micro 4 Pin Brad Harrison Connector		
MS18 = 2 Pin Amp Junior Power Timer Connector		
MS19 = 2 Pin Deutsch Connector		

MS11 = 12 ft 4-Conductor Cable
MS15DC = 3000 PSI max #8-32 Post for Wire Connection

Electrical Visual Indicator	Current/Thermal Lockout
MS13DC = Threaded Connector and Light (Direct Current)	**Omit =** None
MS14DC = Male 5 Pin Brad Harrison Connector & Light (Direct Current)	**LC =** Low Current
MS14AC = Male 5 Pin Brad Harrison Connector & Light (Alternating Current)	**T =** Thermal Lockout
	LCT = Low Current with Thermal Lockout

MS = Cam Operated Switch with 1/2” Conduit, Female Connection

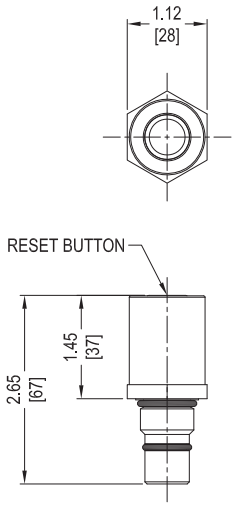
Visual Indicator

D = Pointer
D5 = Latching Visual Pop-Up
D5AS = Latching Visual Pop-Up with aluminum shroud
D8 = Visual with Thermal Lockout
D10 = Non-Latching Indicator
D13 = Stainless Steel Latching Indicator with Music Wire Spring

*Please contact factory for structuring a pressure switch part number

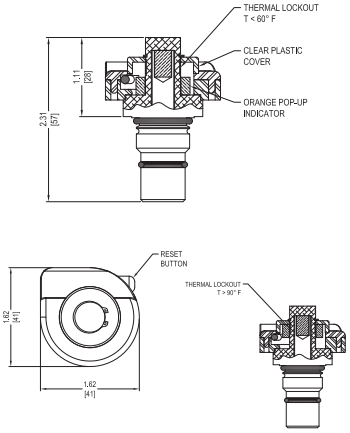
D5

Application	Visual Dirt Alarm
Max Pressure	6,000 PSI
Max Cyclic Pressure	4,000 PSI
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Thread	3/4-16 UNF - 2A
Switch Type	Latching
Seal	Buna, Viton
Material	Aluminum
Order Example	D5-20, D5V-40



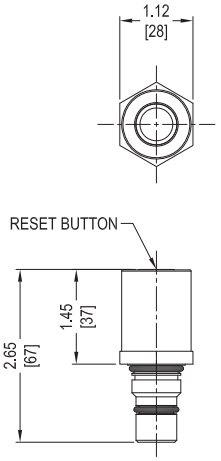
D8

Application	Visual Dirt Alarm with Thermal Lockout
Max Pressure	6000 PSI
Max Cyclic Pressure	4000 PSI
Trip Pressure *(Bypass Cracking Pressure)*	20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 85 (90) PSID
Thread	3/4-16 UNF - 2A
Switch Type	Latching
Seal	Buna, Viton
Material	Aluminum
Order Sample	D8-60, D8V-40



D9

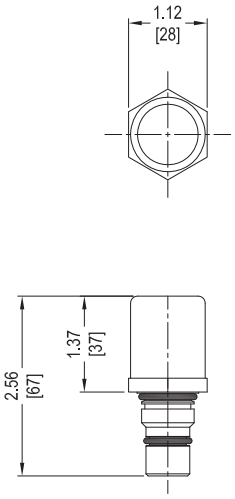
Application	Visual Dirt Alarm
Max Pressure	6,500 PSI
Max Cyclic Pressure	6,000 PSI
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Thread	3/4-16 UNF - 2A
Switch Type	Latching
Seal	Buna, Viton
Material	Stainless Steel
Order Sample	D9-30, D9V-30



Visual Indicators

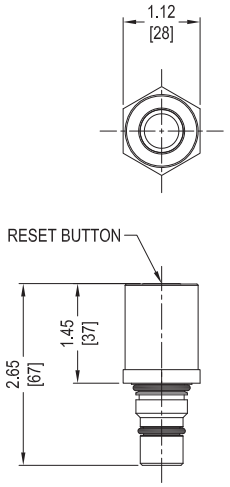
D10

Application	Visual Dirt Alarm
Max Pressure	6,500 PSI
Max Cyclic Pressure	4,000 PSI
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Thread	3/4-16 UNF - 2A
Switch Type	Non-latching
Seal	Buna, Viton
Material	Aluminum
Order Sample	D10-30, D10V-50



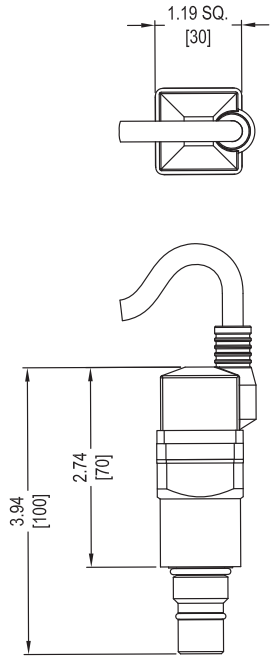
D13

Application	Visual Dirt Alarm
Max Pressure	6,500 PSI
Max Cyclic Pressure	6,000 PSI
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Thread	3/4-16 UNF - 2A
Switch Type	Latching
Seal	Buna, Viton
Material	Stainless Steel with music wire spring
Order Sample	D13-50, D13V-75



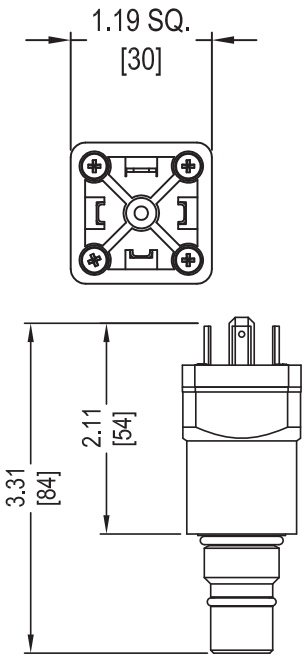
MS5

Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	1 ft. 18 gauge 4 conductor cable
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS5-40, MS5LC-40, MS5LCT-40, MS5VLCT-50



MS10

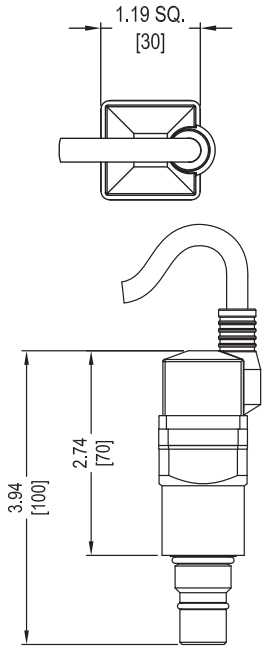
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	DIN 43650 Connector, Male
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS10-40, MS10LC-40, MS10LCT-40, MS10VT-40



Electrical Indicator

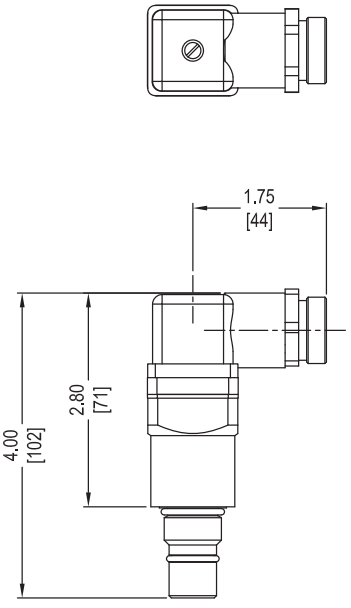
MS11

Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	12 ft. 18 gauge 4 conductor cable
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS11-40, MS11V-50

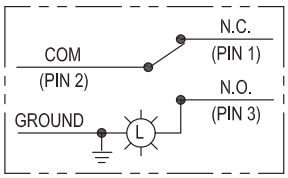


MS12

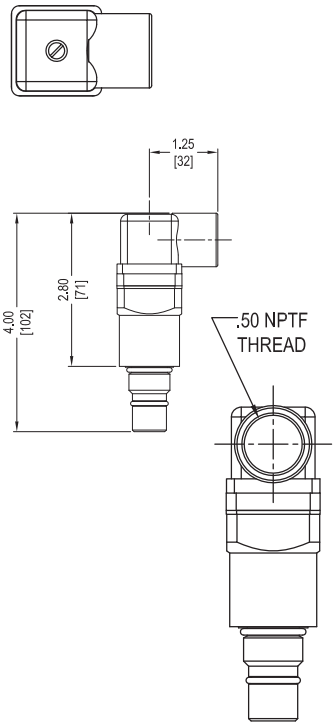
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	5 Pin Brad Harrison Connector
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS12-40, MS12LC-40, MS12LCT-40, MS12VLCT-40



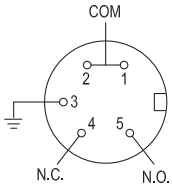
MS13DC

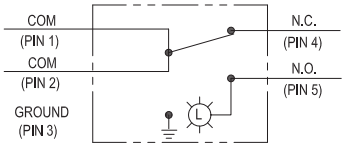


Application	Electrical Visual Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	1/2" NPT Connection
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Appendix A
Order Example	MS13DC-40, MS13D-CLC-40, MS13DCLCT-30, MS13VDC-60

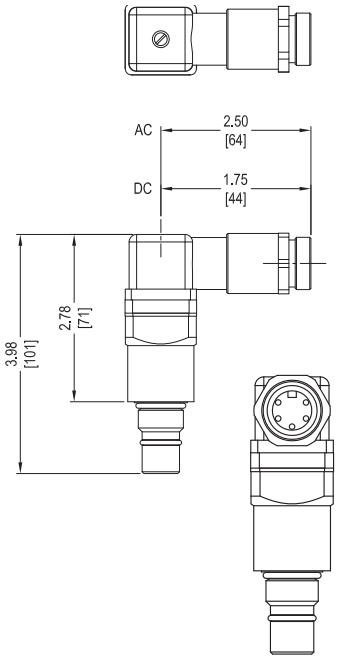


MS14DC





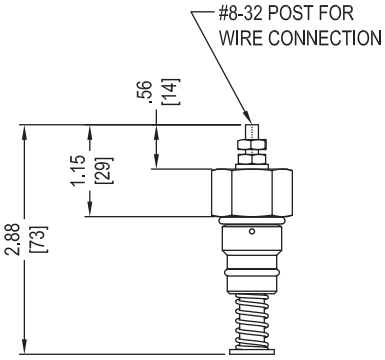
Application	Electrical Visual Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	5 Pin Brad Harrison w/ light
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS14-40, MS14LC-40, MS14LCT-40, MS14VT-40



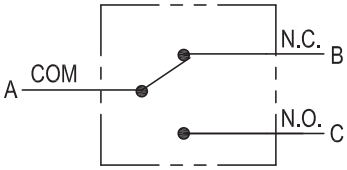
Electrical Indicator

MS15DC

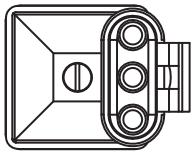
Application	Electrical Dirt Alarm
Max Pressure	3,000 psi
Max Cyclic Pressure	2,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	#8-32 post for wire connection
Thread	¾-16UNF-2A
Switch Type	N.O.
Seal	Buna, Viton
Electrical Ratings	Reference Table 1
Order Example	MS15DC-40

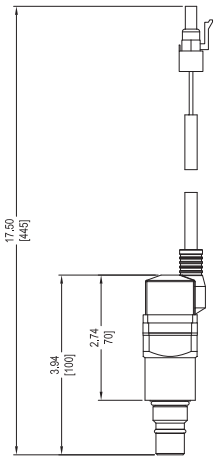


MS16



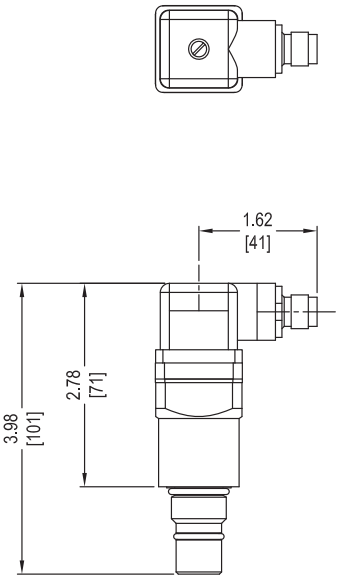
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	3 Contact Weather packed
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS16-40, MS16LC-90, MS16VLC-40





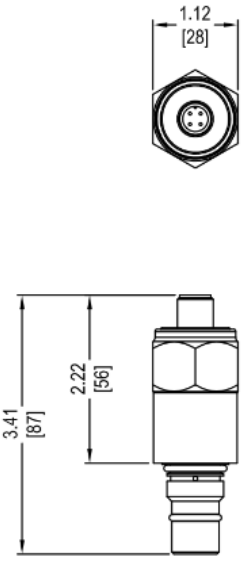
MS17LC

Application	Low Current Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	18 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	4 Pin Brad Harrison "Micro"
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS17LCT-40, MS17VLC-30,



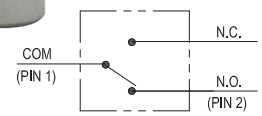
MS17

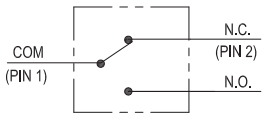
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	19 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	4 Pin M12 "Micro" Connector
Thread	¾-16UNF-2A
Switch Type	N.O./N.C
Seal	Buna, Viton
Available Options	Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS17-30, MS17T-40, MS17VT-50



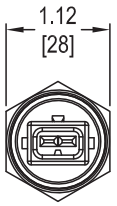
Electrical Indicator

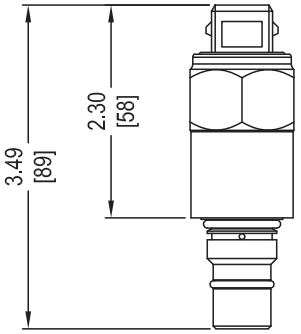
MS18



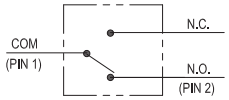


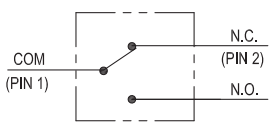
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	2 Pin Amp Junior power timer connector
Thread	¾-16UNF-2A
Switch Type	N.O./N.C. (Must designate NO or NC)
Seal	Buna, Viton
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS18LCNO-40, MS18NC40, MS18TNO-50, MS18LCT-NO-40



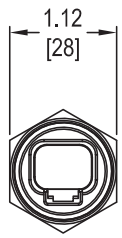


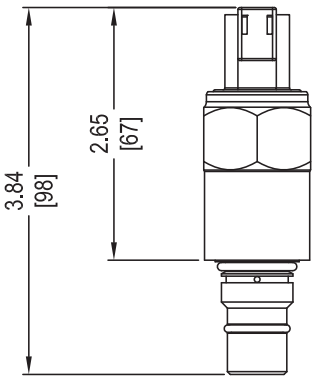
MS19





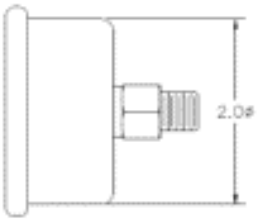
Application	Electrical Dirt Alarm
Max Pressure	6,000 psi
Max Cyclic Pressure	4,000 psi
Temperature Range	-20°F to 225°F (-29°C to 107°C)
Trip Pressure *(Bypass Cracking Pressure)*	10 (15), 15 (20), 20 (25), 25 (30), 35 (40), 45 (50), 55 (60), 70 (75), 85 (90), 95 (100) PSID
Connector	2 Pin Deutsch Connector (DTO4-2-P)
Thread	¾-16UNF-2A
Switch Type	N.O./N.C. (Must designate NO or NC)
Seal	Buna
Available Options	Low Current, Thermal Lockout
Electrical Ratings	Reference Table 1
Order Example	MS19NC-15, MS19NO-40, MS19LCNO-40, MS19T-NC-50, MS19VNC-75





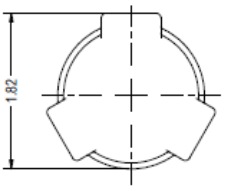
Y

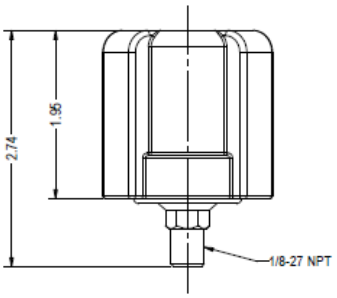
Application	Visual Vacuum Gauge
Trip Pressure *(Bypass Cracking Pressure)*	0-30 inch HG
Thread	1/8" NPT
Switch Type	Gauge
Seal	Buna, Viton
Material	Steel
Order Sample	Contact Factory



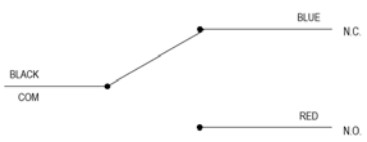
VS

Application	Vacuum
Temperature Range	Contact Factory
Trip Pressure *(Bypass Cracking Pressure)*	10" HG
Connector	Yes
Thread	1/8" NPT
Switch Type	N.O.
Seal	Buna
Available Options	N/A
Electrical Ratings	8 AMPS @ 12 VDC 4 AMPS @ 24 VDC 1 AMPS @ 120 VAC 0.5 AMPS @ 240 VAC
Order Example	Contact Factory

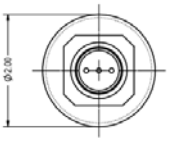


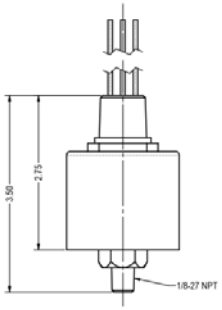


VS1



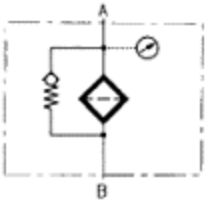
Application	Vacuum
Temperature Range	Contact Factory
Trip Pressure *(Bypass Cracking Pressure)*	10" HG
Connector	Yes
Thread	1/8" NPT
Switch Type	N.O./ N.C.
Seal	Buna
Available Options	N/A
Electrical Ratings	10 AMPS @ 125/250 VAC 5 AMPS @ 30 VDC
Order Example	Contact Factory



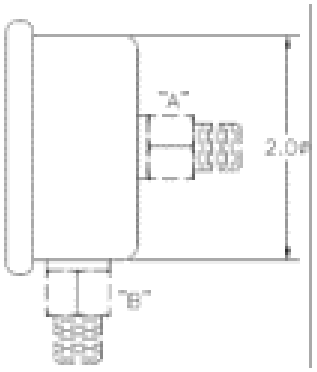


Tank Mounted Indicators

Y2

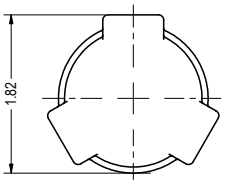


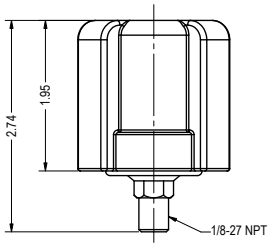
Application	Visual Tank Mounted Gauge
Max Pressure	Up to 100 psi
Max Cyclic Pressure	Contact Factory
Trip Pressure *(Bypass Cracking Pressure)*	25PSI option: (Green) 20 psi (Yellow) 25 psi (Red) 60 psi; 40PSI option: (Green) 35 psi (Yellow) 40 psi (Red) 100 psi
Thread	1/8" NPT
Switch Type	Gauge
Seal	Buna, Viton
Material	Steel
Order Sample	Y2



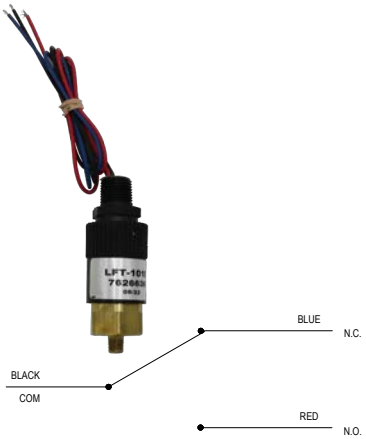
ES

Application	Tank Mounted
Pressure Range	23, 37, 47 PSi
Thermal Lockout	Yes
Connector	Screw terminals with rubber boot
Thread	1/8" NPT
Switch Type	N.O.
Order Info	Contact Factory

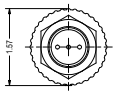


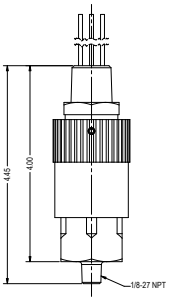


ES1



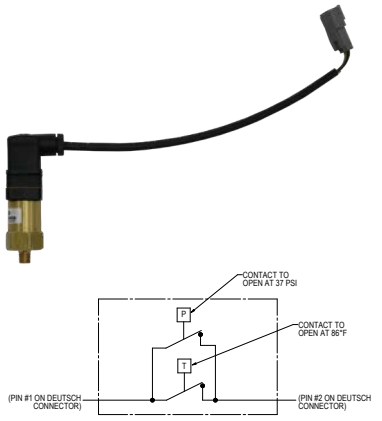
Application	Tank Mounted
Pressure Range	12, 23, 30, 37, 47 PSI
Thermal Lockout	Yes
Connector	1/2" male NPT conduit with 24" wire leads
Thread	1/8" NPT
Switch Type	N.O., N.C.
Order Info	Contact Factory



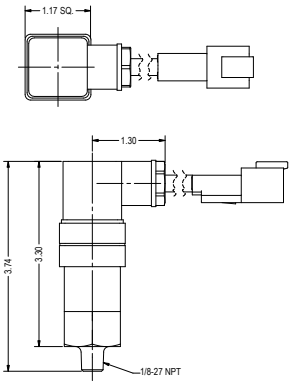


Tank Mounted Indicators

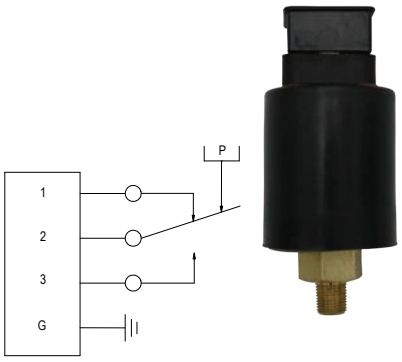
ES2



Application	Tank Mounted
Pressure Range	37 PSI
Thermal Lockout	Yes
Connector	2 Pin Deutsche connector DT04-2P
Thread	1/8” NPT
Switch Type	N.C.
Order Info	Contact Factory



ES3



Application	Tank Mounted
Pressure Range	22, 37 PSI
Thermal Lockout	No
Connector	DIN 43650 connector
Thread	1/8” NPT
Switch Type	N.O., N.C.
Order Sample	Contact Factory

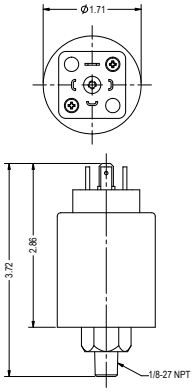


Table 1

Electrical Ratings: Electrical Cartridge Indicators Without Thermal Lockout

Voltage	Voltage Volts@ Amps	Current Range (amps)	MS5	MS5LC	MS10	MS10LC	MS11	MS12	MS12LC	MS13DC	MS13DCLC	MS14DC	MS14DCLC	MS15DC	MS16	MS16LC	MS17	MS17LC	MS14AC	MS14ACLC	MS18	MS18LC	MS19	MS19LC
AC	240 @ 3	0.02 to 3	✓		✓		✓	✓										✓						
AC	220 @ 0.05	0.005 to 0.05		✓		✓			✓													✓		✓
AC	120 @ 5	0.02 to 5	✓		✓		✓	✓																
AC	120 @ 0.05	0.005 to 0.05		✓		✓			✓											✓		✓		✓
AC	24 @ 0.10	0.005 to 0.10		✓		✓			✓											✓				
AC	12 @ 0.25	0.005 to 0.25		✓		✓			✓											✓				
AC	120 @ 4	0.05 to 4																	✓					
AC	115 @ 0.05	0.01 to 0.05															✓				✓		✓	
DC	110 @ 0.3	0.02 to 0.3	✓		✓		✓	✓							✓		✓				✓		✓	
DC	110 @ 0.05	0.005 to 0.05		✓		✓			✓							✓		✓				✓		✓
DC	24 @ 3	0.01 to 3																			✓		✓	
DC	24 @ 2	0.02 to 2	✓		✓		✓	✓		✓		✓			✓									
DC	24 @ 1	0.01 to 1															✓							
DC	24 @ 0.20	0.0 to 0.20												✓										
DC	24 @ 0.10	0.005 to 0.10		✓		✓			✓		✓		✓			✓		✓				✓		✓
DC	12 @ 5	0.01 to 5																			✓		✓	
DC	12 @ 2	0.02 to 2	✓		✓		✓	✓		✓		✓			✓									
DC	12 @ 1	0.01 to 1															✓							
DC	12 @ 0.25	0.005 to 0.25		✓		✓			✓		✓		✓			✓		✓				✓		✓

Electrical Ratings: Electrical Cartridge Indicators With Thermal Lockout*

Voltage	Voltage Volts@ Amps	Current Range (amps)	MS5T	MS5LCT	MS10T	MS10LCT	MS12T	MS12LCT	MS13DCT	MS13DCLCT	MS14DCT	MS14DCLCT	MS16T	MS16LCT	MS17T	MS17LCT	MS14ACT	MS18T	MS18LCT	MS19T	MS19LCT
AC	120 @ 5	0.02 to 5	✓		✓		✓														
AC	220 @ 0.05	0.005 to 0.05		✓		✓		✓											✓		✓
AC	120 @ 5	0.05 to 4															✓				
AC	115 @ 0.05	0.01 to 0.05																✓		✓	
DC	24 @ 2	0.02 to 2	✓		✓		✓		✓		✓		✓		✓			✓		✓	
DC	24 @ 0.10	0.005 to 0.10		✓		✓		✓		✓		✓		✓		✓			✓		✓
DC	12 @ 2	0.02 to 2	✓		✓		✓		✓		✓		✓		✓			✓		✓	
DC	12 @ 0.25	0.005 to 0.25		✓		✓		✓		✓		✓		✓		✓			✓		✓

*Thermal lockout prevents activation below 90°

Notes

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