

# THE KG<sup>®</sup> FILTER CART








# BULK FILTRATION AND ITS IMPORTANCE

In today's volatile world, companies across industries are forced to ensure product longevity and regulate environmental impact of their operation all whilst having to manage low quality fuel. Dirty fuel and lubricants have emerged as one of the leading causes of equipment downtime and harmful emissions resulting in higher costs and lower lifetime value. Such contamination can cause damage to injectors and pumps, as well as lead to unpredictable filter plugging, ultimately resulting in critical machinery coming to a halt and costly engine damage.

To maximize equipment operation, reduce emissions, streamline workforce operations, and augment the long-term value of your investment, it is essential to use the cleanest fuels and lubricants. Since there is little control over fuel quality, bulk filtration is the prime solution to this. Bulk filters are designed to flush fuel resulting in meaningful fuel quality improvement by filtering particles of prescribed sizes as well as free water.

## BENEFITS OF BULK FILTRATION

-  Maximizes the life of your fuel/oil resulting in direct savings
-  Maximizes the life of your machines, engines and pumps
-  Reduces chances of shutdowns
-  Cleaner emissions to improve the air quality and health of your work sites
-  Cleans Diesel oil, Hydraulic oil, Lube oil, Gear oil, and Transformer oil

## APPLICATIONS

Filters new fluid before putting it into service

Transfers fluid from drums or storage tanks to system reservoirs

Removes free water from the system

Used with fluids such as hydraulic, transmission, gear and lube oils



# THE KG FILTER CART

## PRODUCT FEATURES



## ENABLING INDUSTRY 4.0 WITH THE KG FILTER CART

All KG Filter Carts have optionality to be supplied with digital, connected, laser particle counters. These premium particle counters are integrated with the cart and require no additional effort to install but allow for active, wireless reporting to your browser of choice. This can ensure that carts are being used to the maximum potential and that they are in strong working condition at all times. They also help giving a more accurate indication of when filters need to be replaced and allow to add accessories like flow meter to track liquid passed through the hose.

The KG team can also support with monitoring and share updates as and when required. Please reach out to learn more about how KG can help with bringing Industry 4.0 to you!

# THE KG FILTER CART

## PRODUCT DATA SHEET FOR OIL VISCOSITIES UP TO 500 CST

The KG Filtration System is a practical and portable solution for offline filtration, flushing, and fluid transfer. It is suitable for use with both in-plant machinery and mobile equipment to achieve and maintain the appropriate ISO cleanliness levels.

By using HIFI-KG bulk filters, the system can effectively remove 99.95% of abrasive particulates in a single pass. In addition, a Water Absorbing Filter is utilized to eliminate any present water. The system is equipped with a robust vane pump, enabling efficient fluid transfer and filtration.

KEY FEATURES			
Frame	Carbon steel with drip pan at the base	Pump	Vane pump; 25/50 LPM flow rate; relief valve
Motor	220V 50Hz Single Phase (three-phase upon request)	Hoses	5m hydraulic hoses (suction and delivery); stainer supplied for pump protection
Filter Heads	Single, medium pressure, cast aluminium head (dual head available upon request)	Power Panel	Sealed, protected, waterproof power switch
Dimensions	<ul style="list-style-type: none"> <li>• Size: 50cm x 53cm x 104cm</li> <li>• Weight: 68 kgs</li> <li>• Cord Length: 10m</li> </ul>	Measurement Systems	<ul style="list-style-type: none"> <li>• Pressure Gauges at each filter</li> <li>• Additional smart laser particle counters available on request to check cleanliness levels</li> </ul>

Product		Premium Fittings	High quality Italian pump	Extra Durable Wheels	Highly effective Filtration	Integrated Monitoring	Online Connectivity
KGFC04	KG Filter Cart with 4µm filter	✓	✓	✓	✓		
KGFC07	KG Filter Cart with 7µm filter	✓	✓	✓	✓		
KGFC25	KG Filter Cart with 25µm filter	✓	✓	✓	✓		
KGFC04E	KG IoT-Enabled Filter Cart with 4µm filter	✓	✓	✓	✓	✓	✓
KGFC07E	KG IoT-Enabled Filter Cart with 7µm filter	✓	✓	✓	✓	✓	✓
KGFC25E	KG IoT-Enabled Filter Cart with 25µm filter	✓	✓	✓	✓	✓	✓
KGFWAP	KG High Low Water Absorption Cart	✓	✓	✓	✓		

# ADVANTAGES OF HIFI-KG BULK FILTERS

HIFI-KG bulk filters offer several advantages, including:

Fiber glass media to keep filtration effectiveness consistently high

$\beta$ 2,000 -  $\beta$ 10,000 vs. industry standards of  $\beta$ 200 to 1000 only




Single pass filtration that can remove all types of contaminants in one go

The most cost-effective solution available

## BULK FILTERS

Main Data				Filter Media		Applications
Product Number	Direction of flow	Max working pressure	Temperature range	Media type	Micron Rating / Beta Ratio	
SHR 536F07 V	Out/In	24 bar	-25°C to +120°C	Fiberglass	$\beta(7\mu) \geq 2\,000$	Hydraulic oil
SHR 536F25 V	Out/In	24 bar	-25°C to +120°C	Fiberglass	$\beta(25\mu) \geq 2\,000$	Gear oil/engine oil (high viscous fluids)
SHR 536F04 V	Out/In	24 bar	-25°C to +120°C	Fiberglass	$\beta(4\mu) \geq 10,000$	Diesel/ transformer oil (Low viscous fluid)

## WATER ABSORBING FILTER

N° Hifi	 Port size <i>BSP</i>	 $\beta$ 2000	 Media	Dimensions (mm)		Application
				Height	Outer Dia ø ext.	
SNR 536AB0 V	1" 3/4 -12 UN 2B	40	Absorbent	360	117	Removal of free water

Beta ratio (symbolized by  $\beta$ ) is a formula used to calculate the filtration efficiency of a particular fluid filter using base data obtained from multi- pass testing.

The formula used to calculate the beta ratio is:

$$\text{Beta ratio}_{(x)} = \frac{\text{particle count in upstream fluid}}{\text{particle count in downstream fluid}}$$

where (x) is a given particle size



# INLINE BULK FILTRATION OPTIONS



## KG FILTRATION KIT

HIGH-EFFICIENCY PARTICULATE FILTRATION FOR FUEL AND OIL

Max Flow Rate	65 gpm / 246 lpm
Working Pressure	350 psi / 24 bar
Rated Static Burst	800 psi / 55 bar



## KG PRO FILTRATION KIT

COMPLETE FILTRATION FROM CONTAMINATION AND FREE WATER

Max Flow Rate	50 gpm / 189 lpm
Working Pressure	350 psi / 24 bar
Rated Static Burst	800 psi / 55 bar



## KG HIGH-CAPACITY FILTRATION KIT

PARTICULATE FILTRATION FOR HIGHER FLOW RATES

Max Flow Rate	125 gpm / 473 lpm
Working Pressure	350 psi / 24 bar
Rated Static Burst	800 psi / 55 bar



## KG MAXFLOW FILTRATION KIT

MANIFOLD WITH HIGH FLOW & DIRT HOLDING CAPACITY

Max Flow Rate	700 gpm / 2650 lpm (Diesel Fuel)
Working Pressure	150 psi / 10 bar

# ANALYZING YOUR FUEL/OIL CONTAMINATION STANDARDS

Maintaining a well-defined contamination standard is crucial. The following tables provide guidance on achieving the appropriate cleanliness code:

## ISO PARTICLE CLASS STANDARD

ISO 4406 Cleanliness Code		
ISO Code Number	No of Particles per 100 ml	
	More Than	Up to and including
24	8,000,000	16,000,000
23	4,000,000	8,000,000
22	2,000,000	4,000,000
21	1,000,000	2,000,000
20	500,000	1,000,000
19	250,000	500,000
18	130,000	250,000
17	64,000	130,000
16	32,000	64,000
15	16,000	32,000
14	8,000	16,000
13	4,000	8,000
12	2,000	4,000
11	1,000	2,000
10	500	1,000
9	250	500
8	130	250
7	64	130
6	32	64

NAS 1638 Cleanliness Code					
Class	Maximum Number of Particles / 100 ml				
	5-15	15-25	25-50	50-100	>100
00	125	22	4	1	0
0	250	44	8	2	0
1	500	89	16	3	1
2	1000	178	32	6	1
3	2000	356	63	11	2
4	4000	712	126	22	4
5	8000	1425	253	45	8
6	16000	2850	506	90	16
7	32000	5700	1012	180	32
8	64000	11400	2025	360	64
9	128000	22800	4050	720	128
10	256000	45600	8100	1440	256
11	512000	91200	16200	2880	512
12	1024000	182400	32400	5760	1024

## NAS TO ISO CHART

ISO CODE	NAS CLASS
23/21/18	12
22/20/18	--
22/20/17	11
22/20/16	--
21/19/16	10
20/18/15	9
19/17/14	8
18/16/13	7
17/15/12	--

ISO CODE	NAS CLASS
16/14/12	6
16/14/11	--
15/13/10	5
14/12/09	4
13/11/08	3
12/10/08	2
12/10/07	--
12/10/06	1

# KG'S HOLISTIC VALUE PROPOSITION

## INDUSTRIAL BEARINGS & FILTERS FOR 14+ INDUSTRIES

- Spherical Roller Bearing
- Bearing Units
- Self Aligning Bearings
- Needle Roller Bearings
- Air, oil, fuel & hydraulic filters
- Grease

**KG<sup>®</sup> FAG NTN<sup>®</sup>**

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## AUTOMOTIVE BEARINGS

- Wheel Bearings
- Clutch Bearings
- Angular Contact Bearings
- Taper Roller Bearings
- Air, Oil, Fuel & Hydraulic Filters
- Grease

**KG<sup>®</sup> NTN<sup>®</sup> FAG**

**SCHAEFFLER**

## PREMIUM OFFERINGS FOR TRUCKS

- Repair Insert Unit
- Taper Roller Bearings
- Wheel Hubs
- Air, Oil & Fuel Filters
- Engine & Chassis Components

**KG<sup>®</sup>**  
TRUCK SOLUTIONS

**KG<sup>®</sup>**  
FILTERS

**FAG**

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## INDUSTRIAL SPARES

- Linear Motion Products
- Gearboxes & Motors
- Automated Lubrication Solutions
- Grease
- Cranes & Hoists

**SCHAEFFLER**

**Bonfiglioli**

**HIWIN<sup>®</sup>**

## BULK FILTRATION SOLUTIONS FOR CLEAN FUEL & OIL

- Filter Carts
- Diesel Filtration Kits
- Bulk Filters

**KG<sup>®</sup>**  
FILTERS

**DropsA**

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