

## SIGMA® – The return of the original

### THE suction and delivery hose for the transport of abrasive media

Through thoroughly and matured development over the past year, we are proud to be able to introduce our next generation of the **extremely abrasion resistant Semperit SIGMA®** transport system. The original product range has been revised and important, innovative changes have been made for introducing an upgraded product.

The system of suction and delivery hoses for hydraulic and pneumatic transport of abrasive media now encompasses **3 different products**.

With its substantially improved quality, the **premium SIGMA® plus FS 3320** hose replaces the former FS 3320 product and represents the perfect addition to the already known and highly trusted **SIGMA® black FS 3325** and **SIGMA® white FS 3340** hose.

The new SIGMA® plus FS 3320 has been equipped with a high-quality **MSHA** cover, a **thicker inner liner** as well as a **colored wear indicator** for the early detection of abrasion. Due to its **premium quality**, the hose **outperforms** (e.g. longer lifetime) the standard competitors' products and is placed in the **premium segment**. The especially robust and flexible hose finds its application in the transport of abrasive material such as cement, sand, phosphates, quartz, dolomite, glass splinters, dry mixed animal food, grain, bark, wood shavings.

The same applications are covered by our **SIGMA® black FS 3325** which is the **comparable standard product** to the hoses from the major market players **in terms of quality**.


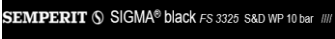

The following **essential features** characterize the **SIGMA® plus**:



- High-quality **MSHA cover** ensures higher **weather resistance** and **flame resistance**
- Same high abrasion resistant inner liner as previously but a **thicker, wear-resistant layer** enables a longer lifetime
- A more compact insert package enables **lower bending radius** and **higher flexibility**
- **Wear indicator** – for early detection that a replacement is required
- Couplings and gaskets are the same as for the predecessor, so the **identical outer shape** is retained

## SIGMA® Products – Overview

Below we like to provide you with a descriptive overview of the new Semperit transport system, including the main hose characteristics:

	<b>SIGMA® PLUS</b> <b>FS 3320</b> 	<b>SIGMA® BLACK</b> <b>FS 3325</b> 	<b>SIGMA® WHITE</b> <b>FS 3340</b> 
<b>Application &amp; Features</b>	Pneumatic and hydraulic transport of <b>abrasive materials</b> with <b>wear indicator</b> (cement, sand, phosphates, quartz, dolomite, glass splinters, dry mixed animal food, grain, bark, wood shavings...)	Pneumatic and hydraulic transport of <b>abrasive materials</b> (cement, sand, phosphates, quartz, dolomite, glass splinters, dry mixed animal food, grain, bark, wood shavings...)	Pneumatic and hydraulic transport of <b>solid</b> and <b>dust-like food</b> (animal feed, silo products, grain, light colored plastic granulates and oil-laden substances...)
<b>Temperature</b>	-35°C / <b>+80°C</b>	-35°C / +70°C	-35°C / <b>+80°C</b>
<b>Tube</b>	<b>NR/BR/SBR</b> black, <b>electrically conductive</b> , abrasion-resistant, <b>colored wear indicator</b> , average wear of the tube <b>50 mm<sup>3</sup></b> (according to DIN ISO 4649:2014)	<b>NR/BR/SBR</b> black, antistatic, abrasion resistant, average wear of the tube <b>70 mm<sup>3</sup></b> (according to DIN ISO 4649:2014)	<b>NBR/PVC</b> white, antistatic, abrasion resistant, <b>food quality</b> acc. to BfR XXI (category 4), average wear of the tube <b>140 mm<sup>3</sup></b> (according to DIN ISO 4649:2014)
<b>Reinforcement</b>	Textile, wrapped, zinc plated wire helix	Textile, wrapped, zinc plated wire helix	Textile, wrapped, zinc plated wire helix
<b>Cover</b>	<b>EPDM/SBR MSHA approved</b> black, corrugated, electrically conductive, resistant to abrasion, weather, cloth impression, <b>flame resistant acc. to MSHA approved cover: MSHA IC-8/19</b>	<b>EPDM/SBR</b> black, corrugated, electrically conductive, resistant to abrasion, weather, cloth impression	<b>CR</b> black, corrugated, electrically conductive, resistant to abrasion, oil, weather, cloth impression



Gerhard Mahlfleisch (Product Manager, Semperflex Industrial):

“With the re-design of the Semperit SIGMA® hoses, the quality level of the original SIGMA® system is taken to the next level. It combines the known high standard with improved performance features such as providing a lower bending radius, for improving the handling in static and mobile applications. The premium product SIGMA® plus FS 3320 additionally stands out with the MSHA cover and a colored wear indicator.”



## SIGMA® System – Components & Benefits

The SIGMA® system is a complete line system that contains all the necessary fittings (couplings, gaskets, reducers, elbow fittings, branches, adaptors, shut-off valves, etc.).

Semperit not only **provides the complete coupling system** for all SIGMA® products but also stocks the **black gaskets** as well. The white gaskets for the SIGMA® white FS3340 are available on request only.

### Flexibility

The specially designed SIGMA® conveyor system can be used **extremely flexible** thanks to its **modular design**. It is easy to integrate into existing systems, which leads to **minimal installation times** and thus **less downtimes** and sustainable **cost savings**. The right choice of elements of the SIGMA® system makes the transport of a wide range of media possible.

### Easy assembling

SIGMA® has a **specific coupling system**, that consists of a gasket and 2 aluminum flanges (DIN EN 1092-1 PN10) and is mounted on the outside of the hose. This assures the full flow of the transported medium.

All elements are **easy to assemble** with common work tools and by following the general assembling instructions. If an exchange is nevertheless required, the **metallic flange couplings can be reused**.

Attention: Please also see the special handling and storage guidelines for our Sigma® system ([link](#)).

### Long Lasting

The exceptionally long service life can even be optimized and extended by various factors:

- System components can be **individually tailored** to the material being conveyed
- On the couplings, the hose can be rotated around the longitudinal axis, which **prevents one-sided wear**, especially when conveying abrasive media – this can significantly extend the service life

### Reduced Noise Level

Noise caused by dry goods transmitting through steel pipes can be significantly reduced when converting to the SIGMA® system. The **energy absorbing characteristics** greatly reduce noise levels – especially in indoor applications where noise is retained within the building.

## Production – Semperit factory, Odry, CZ

Semperit's **state-of-the-art production** in our factory in Odry, CZ, provides the best-fit technology for producing our new Semperit SIGMA® generation. The **fully automated** and **supervised** production meets all requirements for constant inner and outer dimensions, concentricity and a consistent corrugation of the hoses. This ensures the correct position of the coupling at each point of the hose.

## Order & Delivery

The **SIGMA® plus** and **SIGMA® black** as well as the corresponding **couplings** and **gaskets** are held on **stock** and are available from **2" to 8"** (SIGMA® plus: all sizes on stock; SIGMA® black: 3 sizes on stock - 4" / 6" / 8"); our SIGMA® white products are only made to order.

The SIGMA® hoses can be delivered on coils up to **DN 152**; **DN 203** is supplied in **straight lengths**. Only **full-length** goods can be ordered, for purchasing cut hoses please contact Semperit SIGMA® distribution partners.

Please [contact our customer service team](#) for expert advice and place your order now. Further technical details can be obtained from the respective datasheet on our website ([link](#)).

