

SYGEF® Exhaust → packed to preserve value



Any questions? Would you like for us to contact you?

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The technical data are not binding and not expressly warranted characteristics of the goods. They are subject to change. Our General Conditions of Sale apply.

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→ Completely
Controlled Process

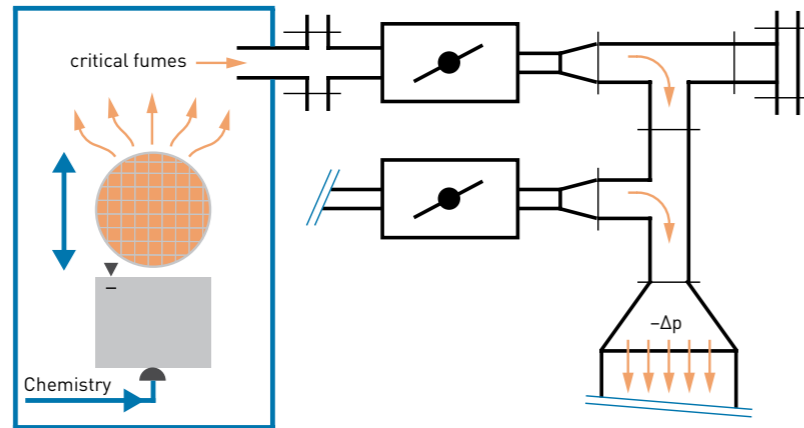
System Specification
SYGEF® Exhaust
exhaust systems in PVDF

Cost saving, non corroding Piping System For applications in the Microelectronics and Chemical Industry

Application

→ Semiconductor Processing

The safe conveying of critical fumes generated during wet etch wafer processing is one typical application out of many that are possible.



Solution

→ SYGEF® Exhaust Piping System

Designed to meet the requirements of even the newest 300mm semiconductor fabrication facilities, SYGEF® Exhaust is tailored to the customer needs where the safe conveying of high volumes of critical exhaust gases and fumes is essential. The combination of easy planning, handling and installation with superior performance characteristics meeting the FM-4910 Standard adds to the cost benefits. Working with a polymer system is simply just more flexible in terms of design and commissioning when compared to stainless steel installations.

SYGEF® Exhaust is available in SYGEF® PVDF (polyvinylidene fluoride) pipe, dampers and fittings, offering engineers increased flexibility for designing and also upgrading



existing exhaust systems. The easy to repair connector system, being 100% metal and corrosion free offers high strength, low weight, abrasion resistance, and a wide operating temperature range. These features culminate in making up the material of choice for the stringent requirements of the semiconductor industry.

With a successful history already behind it, SYGEF® Exhaust has been proven in pilot references, which are available upon request.

Hot Gas Back Welding, Fix Flanging as well as joining with Georg Fischer Flange Adaptors is possible to complete the system.

SYGEF® Exhaust – System Specification

Material	Polyvinylidene fluoride (PVDF)
Colour	translucent
Density	-1.78g/cm ³ (ISO 1183 / ASTM D792)
Surface tension	30-35mJ/m ²
Linear expansion coefficient	0.12-0.18mm/mK (DIN 53752)
E-module (tensile strength)	2100N/mm ² (ISO 527/ASTM D790)
Thermal conductivity	0.19W/mK (DIN 52612)
Surface resistivity	5x 10 ¹⁴ Ωcm (IEC 60093)
Dimension	d75 (2½")-d400 (16")
Pressure Rating	Maximum negative pressure: -ΔPmax = 1500Pa (0.015 bar, 6" water column)
Temperature Rating	PVDF: -20°C to 140°C [-4°F-284°F], System: ΔT= 30°C
Production	Fittings: injection moulded, segment welded Pipes: extruded
Marking	All components are embossed with a permanent identification during the production process to ensure full traceability. Lot No Material Dimension
Testing and Inspection	Inclusions Visual inspection Dimension tolerance
Approvals/Conformance	FM-4910 listing: www.fmglobal.com
Welding Technology	Hot Gas Back Welding, Rod diameter 4mm Recommended tool: duratherm SC Recommended Manufacturer: www.wegenerwelding.com
Documentation ⁽¹⁾	EN 10204 2.2 EN 10204 3.1b
Packing	Fitting: multiple components bagged in specified bag Pipe: capped and single bagged in specified bag
Labeling	Brand Name Product Description Code Number Material Dimension CE-Labeling
Main Applications	Safe conveying of critical exhaust gases and fumes within state-of-the-art manufacturing plants. Due to its excellent chemical resistance it is widely used within the Microelectronics and Chemical Industry.

⁽¹⁾ on request