

Position paper of the EHEDG Test Methods Subgroup:

***Hygienic Process connections to use with
hygienic components and equipment***

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When installing hygienic process components and or equipment in a process line it is of great importance that these components and equipment are connected in a hygienic, cleanable way.

The subgroup recommends using a process connection or pipe coupling of a good hygienic design according to EHEDG Documents 8 (hygienic design criteria) and Document 16 (pipe couplings) and cleanable in-place according to EHEDG Document 2.

Critical to the design and connection are: the avoidance of any dead areas, providing an axial stop with controlled compression of the seal and a centering of the flanges.

Certain process connections and pipe couplings have been evaluated and tested for in-place cleanability: Some of these are also certified and can display the EL Logo (see list of certified components).

This list is not exhaustive.

Process connection	Pipe coupling
GEA Tuchenhagen GmbH, Varivent® ball housing	DIN 11864-1 Form A and B DIN 11864-2 Form A and B DIN 11864-3 Form A and B
Negele EHG-Tubes with Cleanadapt®	Neumo GmbH & Co. KG, Bioconnect® (O-ring)
Krohne Messtechnik GmbH & Co. weld-in pipe HWT2X0	Neumo GmbH & Co. KG, Connect S®
APV In-Line ball housing	Kieselmann GmbH, type "K-system"

	GEA Tuchenhagen GmbH, HP-SealCon flange coupling
	SMS from Sodime S.A., in combination with EPDM gasket
	ISO 2852 in combination with the Dupont de Nemours Kalrez/Stainless Steel gasket
	ISO 2852 in combination with the Hyjoin PEEK/Stainless Steel gasket
	Swagelok TS fitting in combination with EPDM gasket
	ISO 2853 in combination with Combifit gasket, EPDM, Viton
	DIN 11851 with Siersema gasket

The hygienic installation of parts of equipment is also covered in EHEDG Doc 34, Integration of Hygienic and Aseptic Systems.

Note: The Test Method subgroup is comprised of members from research and test institutes involved in the testing, evaluation and certification of components and equipment for food processing.