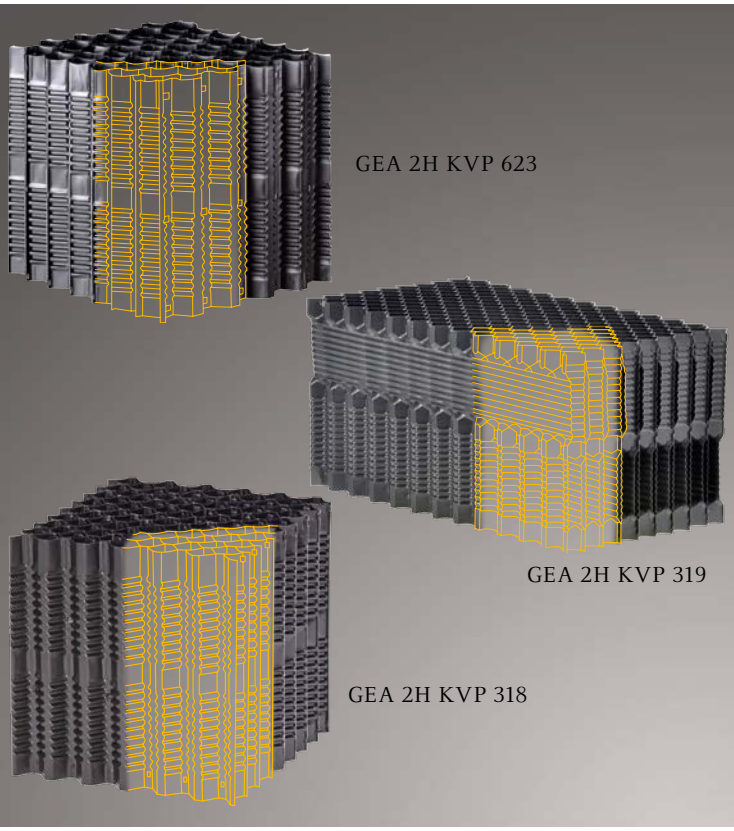
GEA 2H BIOdek® Vertical Flow Fills with HX-Factor

For biological processes in highly polluted waste water



High performance results in high biomass growth! GEA 2H BIOdek® with vertical channels reliably releases excess sludge of trickling filters or of submerged applications. Even at low recirculation rates they enable safe operation of concentrated waste water or application of high volumetric loads. The straight channels ideally support the water circulation in submerged contact aeration.

By free selection of the sheet thicknesses highest mechanical strength is achieved for a long design-life. GEA 2H BIOdek® is resistant against rot, fungi and most chemicals. UV protection additives are part of the compounds. In our manufacturing process we use premium quality materials for high quality requirements. With our unique welding process fills can be assembled at any place of the world environmentally friendly, safe and avoiding the usage of solvents.

For more than 40 years we have been consistently developing and improving fills for trickling filters and contact aeration. This puts us today in the position of a leading supplier of biofilm technology. You may profit from our experience gained in equipping hundreds of plants with fill media. We will be glad to support you in the design of highly efficient, energy saving trickling filters and sub-merged fixed beds.

Our products have got the HX-Factor. It is our promise and stands for our unique competence in water and waste water treatment and in heat exchange (**HX** = **H**EAT E**X**CHANGE).

HX-Factors of our Vertical Flow Fills

- Optimum structure ensures sludge removal and water circulation
- Freely selectable foil thickness for high bearing loads
- No memory effect
- Environmental friendly, impact and ageing resistant PP
- PVC optional with reinforced or folded edges

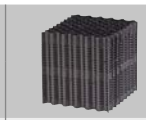
GEA 2H BIOdek® Vertical Flow Fills

Technical Data

	PP	PVC
Void ratio	> 97 %	
Maximum length	96 "	
Maximum width	24 "	
Standard height	12 or 24 "	
Continuous operating temperature	158 °F	131 °F
Max. operating temperature (short term)	176 °F	140 °F

Maximum tolerances: On all dimensions +/- ¾" or 2 % whichever is the greater. Tighter tolerances by prior agreement.

Types

Application			Type	Material	Specific surface area	Corrugation height
Trickling Filter	Submerged fixed bed				ft²/ft³	mm
Moderately polluted water – medium load	Nitrification		KVP 318	PP	46	18
			KVC 318	PVC	46	18
Moderately polluted water – medium load	Nitrification/ Carbonaceous oxidation		KVP 319/619*	PP	43	19
			KVC 319/619*	PVC	43	19
Strongly polluted water - high load	Carbonaceous oxidation		KVP 323/623	PP	38	23
			KVC 323/623	PVC	38	23

*Additional feature of KVP 319: Channels have horizontal connections.

Remarks: The first figure of the type name indicates the standard height (e.g. KVP/KVC 323 → standard height 305 mm/approx. 12"; KVP/KVC 623 → standard height 610 mm/approx. 24").
Channel diameter = 2 x corrugation height.

Support requirements: The GEA team will support you to find an optimal solution for the support structure.

Installation of continuous channels: KVP/KVC media types can be installed with continuous vertical channels by a special installation system.

This information has been put together with greatest care. However, any performance data given in this leaflet is subject to compliance with certain surrounding conditions and hence may vary from case to case. Further, we reserve the right to make changes at any time without notice. We strongly recommend (i) reconfirmation with GEA 2H whether this information is still fully valid, before using it for final designs and (ii) to verify performance data taking into account the actual surrounding conditions. GEA 2H takes no responsibility for any consequences due to non-compliance with these recommendations.

TÜVRheinland ZERTIFIZIERT Management System ISO 9001:2008 www.tuv.com ID 9105070210

GEA 2H Water Technologies, Germany, is ISO 9001:2008 certified.

GEA Heat Exchangers

GEA 2H Water Technologies GmbH

Dieselweg 5, 48493 Wettringen, Germany
Phone +49 25 57 / 93 90 0, Fax +49 25 57 / 93 90 49
2h.hx.de@gea.com, www.gea-2h.com

GEA 2H Water Technologies

14151 Interdrive West - Houston, Texas 77032
Phone 281-227-7900, Fax 281-227-7084
2h.hx.us@geacom

© GEA 2H Water Technologies GmbH. Subject to modification. K0-12/2014-WC-2014-0017-US